SOIL SURVEY

Evangeline Parish Louisiana

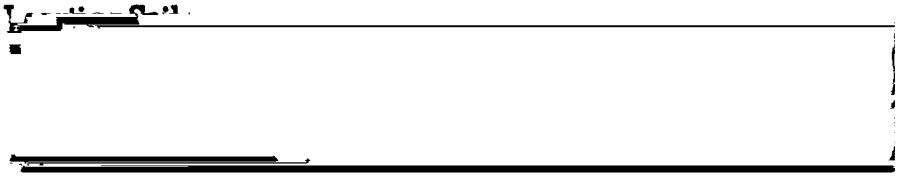
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
LOUISIANA AGRICULTURAL EXPERIMENT STATION
Issued August 1974

Major fieldwork for this soil survey was done in the period 1964–68. Soil names and descriptions were approved in 1969. Unless otherwise indicated, statements in the publication refer to conditions in the parish in 1969. This survey was made cooperatively by the Soil Conservation Service and the Louisiana Agricultural Experiment Station. It is part of the technical assistance furnished to the Evangeline Soil and Water Conservation District.

Either enlarged or reduced copies of the soil map in this publication can be made by commercial photographers, or they can be purchased on individual order from the Cartographic Division, Soil Conservation Service, United States Department of Agriculture, Washington, D.C. 20250.

HOW TO USE THIS SOIL SURVEY

THIS SOIL SURVEY contains information that can be applied in managing farms, and woodlands; in selecting sites for roads, ponds, buildings, and other structures; and in judging the suitability of tracts of land for farming, industry, and recreation.



All the soils of Evangeline Parish are shown on the detailed map at the back of this publication. This map consists of many sheets made from aerial photographs. Each sheet is numbered to correspond with a number on the Index to Map Sheets.

On each sheet of the detailed map, soil areas are outlined and are identified by symbols. All areas marked with the same symbol are the same kind of soil. The soil symbol is inside the area if there is enough room; otherwise, it is outside and a pointer shows where the symbol belongs.

Finding and Using Information

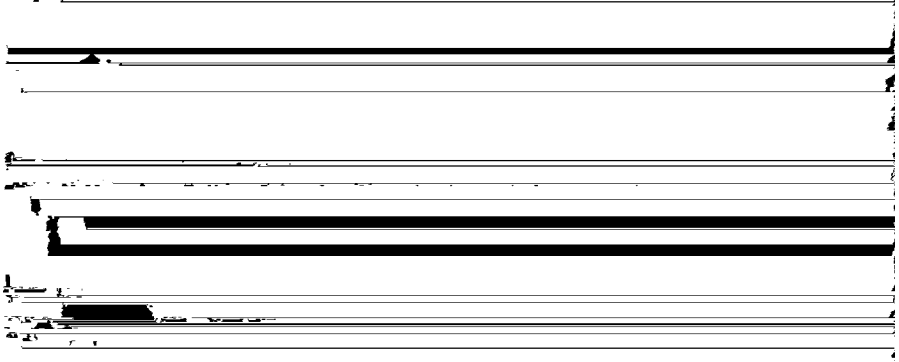
The "Guide to Mapping Units" can be used to find information. This guide lists all the soils of the county in alphabetic order by map symbol and gives the capability classification of each.

Individual colored maps showing the relative suitability or degree of limitation of soils for many specific purposes can be developed by using the soil map and the information in the text. Translucent material can be used as an overlay over the soil map and colored to show soils that have the same limitation or suitability. For example, soils that have a slight limitation for a given use can be colored green, those with a moderate limitation can be colored yellow, and those with a severe limitation can be colored red.

Farmers and those who work with farmers can learn about the use and management of the soils from the soil descriptions.

Foresters and others can refer to the section "Woodland and Woodland Grazing," and the descriptions of the mapping units.

Game managers, sportsmen, and others can find information about soils



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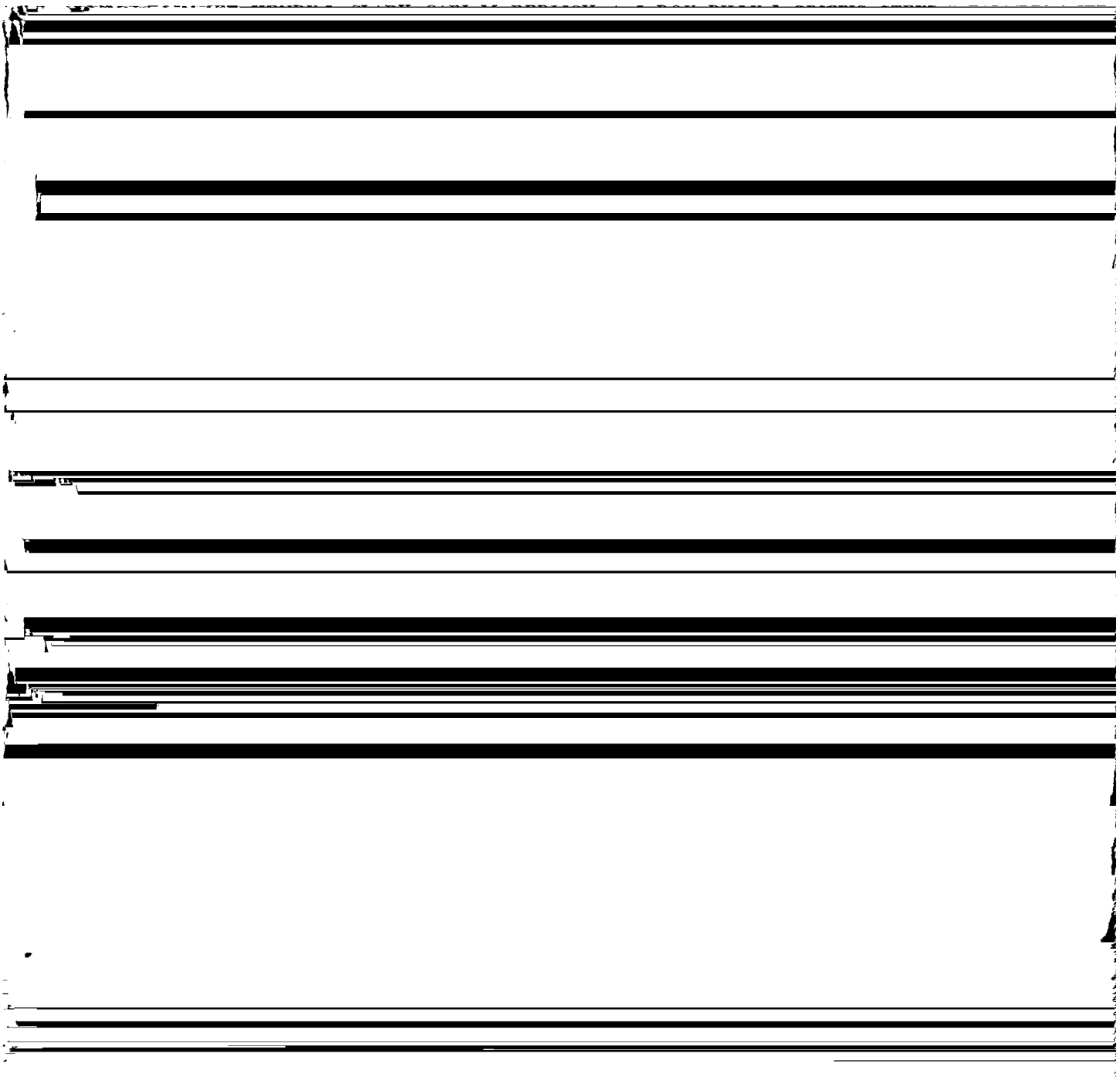


AND RICHARD M. HOLLIER, SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, IN COOPERATION WITH THE LOUISIANA AGRICULTURAL EXPERIMENT STATION

the parish knowing they likely would find many soils they had already seen and perhaps some they had not. They observed the steepness, length, and shape of slopes, the size and speed of streams, the kinds of native plants or crops, the kinds of rock, and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material that has not been changed much by leaching or by the action of plant roots.

The soil scientists made comparison among the profiles they studied, and they compared these profiles with those in parishes nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. The *soil series* and the *soil phase* are the categories of soil classification most used in a local survey.

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or other geographic feature near the place where a soil of that series was first observed and mapped. Caddo and Duralde, for example, are the names of two soil series. All the soils in the United States having the same series name are essentially alike in those characteristics that affect their behavior in the undisturbed landscape.

Soils of one series can differ in texture of the surface soil and in slope, stoniness, or some other characteristic that affects use of the soils by man. On the basis of such differences, a soil series is divided into phases. The name of a soil phase indicates a feature that affects management. For example, Guyton silt loam, occasionally flooded, is one of several phases within the Guyton series.

After a guide for classifying and naming the soils had been worked out, the soil scientists drew the boundaries of the individual soils on aerial photographs. These photographs show woodlands, buildings, field borders, trees, and other details that help in drawing boundaries accurately. The soil map in the back of this publication was prepared from the aerial photographs.

The areas shown on a soil map are called mapping units. On most maps detailed enough to be useful in planning the management of farms and fields, a mapping unit is nearly equivalent to a soil phase. It is not exactly equivalent, because it is not practical to show on such a map all the small, scattered bits of soil of some other kind that have been seen within an area that is

While a soil survey is in progress, soil scientists take soil samples needed for laboratory measurements and for engineering tests. Laboratory data from the same kinds of soil in other places are assembled. Data on yields of crops under defined practices are assembled from farm records and from field or plot experiments on the same kinds of soil. Yields under defined management are estimated for all the soils.

But only part of a soil survey is done when the soils have been named, described, and delineated on the map, and the laboratory data and yield data have been assembled. The mass of detailed information then needs to be organized in such a way as to be readily useful to different groups of users, among them farmers, managers of woodland, and engineers.

On the basis of yield and practice tables and other data, the soil scientists set up trial groups. They test these groups by further study and by consultation with farmers, agronomists, engineers, and others then adjust the groups according to the results of their studies and consultation. Thus, the groups that are finally evolved reflect up-to-date knowledge of the soils and their behavior under present methods of use and management.

General Soil Map

The general soil map at the back of this survey shows, in color, the soil associations in Evangeline Parish. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

The map showing soil associations is useful to people who want a general idea of the soils in the parish, who want to compare different parts of the parish, or who want to know the location of large tracts that are suitable for a certain kind of land use. Such a map is a useful general guide in managing a watershed, a wooded tract, or a wildlife area, or in planning engineering works, recreational facilities, and community developments. It is not a suitable map for planning the management of a farm or field, or for selecting the exact location of a road, building, or a similar structure, because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect their management.

The soil associations in Evangeline Parish are described in the following pages. The terms for texture

The level soils at high elevations in the northeastern part of the parish formed in pre-Prairie age loess. They are well-developed, grayish, acid, loamy soils that have a low sand content.

The level soils at high elevations in the northwestern part of the parish formed on the Montgomery age alluvial terrace. They are well-developed, grayish, acid, loamy soils that have a moderate sand content.

The level soils at low elevations in the southern part of the parish formed on the Prairie age deltaic alluvial terrace. Grayish, loamy soils that have a moderately dark colored, dense, clayey subsoil occur in the native grassland areas. Grayish, loamy soils that have a light-colored, dense, clayey subsoil occur in wooded areas along the drainageway. Soils along the eastern edge of this terrace are influenced by post-Prairie age loess;

Caddo soils occupy broad areas between mounds and microridges. They have a surface layer of thick, gray silt loam mottled with yellowish brown and a subsoil of gray silty clay loam mottled with red and yellowish brown. Caddo soils are medium acid to very strongly acid, poorly drained, and slowly permeable.

Messer soils are on mounds and microridges. Their surface layer is grayish-brown and pale-brown silt loam. The upper part of the subsoil is thick, yellowish-brown silt loam, and the lower part is yellowish-brown silty clay loam mottled with red and gray. Messer soils are moderately well drained and slowly permeable.

Nearly all of the association is pine woodland and most of it is in large tracts owned by timber companies. Small areas are used for cultivated crops, mostly rice and soybeans. A few cleared areas are used for pasture.

Wrightsville soils occupy broad areas between mounds. Their surface layer is thick, gray and light-gray silt loam that tongues into the layer beneath. The subsoil is gray or light olive-gray silty clay mottled with yellowish brown. Wrightsville soils are poorly drained and very slowly permeable.

Vidrine soils occupy mounds, smoothed mound areas, and microridges. Their surface layer is thick, brownish silt loam. The subsoil is grayish-brown silty clay mottled with red and yellow. Vidrine soils are somewhat poorly drained and slowly permeable.

The soils of this association are strongly acid near the surface and very strongly acid grading to neutral in the subsoil. All are low in natural fertility.

Nearly all of the association is wooded. Small areas have been cleared and smoothed and are used for crops and pasture. The principal crop is rice. Farms in this association range from about 20 to 100 acres in size. The principal limitations are wetness, some ponding in depressions, low natural fertility, and unsmoothed mounds that interfere with tillage.

5. Patoutville-Crowley-Jeanerette association

Soils that have a moderately dark colored and dark colored, loamy or clayey subsoil

This is an association of level or nearly level, clayey and loamy soils in the southeastern part of the parish. Elevations are dominantly 60 to 75 feet above sea level.

This association makes up about 8 percent of the parish. It is 44 percent Patoutville soils, 24 percent Crowley soils, and 14 percent Jeanerette soils. Midland, Mowata, and Vidrine soils make up most of the remaining 18 percent.

Patoutville soils occupy long, narrow, natural levees and microridges in broad, level areas. Their surface layer is grayish-brown silt loam. The subsoil is dark grayish-brown light silty clay loam mottled with red and yellowish brown. Patoutville soils are somewhat poorly drained and slowly permeable.

Crowley soils occupy areas between the microridges. Their surface layer is thick, dark grayish-brown and grayish-brown silt loam. The subsoil is dark-gray silty clay mottled with red. Crowley soils are poorly drained to somewhat poorly drained and very slowly permeable.

Jeanerette soils occupy broad, level, slightly concave areas at low elevations. Their surface layer is very dark gray silt loam. The subsoil is very dark grayish-brown and dark-gray silty clay loam mottled with light olive brown in the lower part. It contains carbonate concretions. Jeanerette soils are poorly drained and slowly permeable.

Patoutville and Crowley soils are slightly acid to strongly acid in the surface layer and very strongly acid to neutral in the subsoil. They are low in natural fertility. Jeanerette soils are slightly acid to neutral in the surface layer and neutral to mildly alkaline in the subsoil. They are high in natural fertility.

Most of the association is in cultivated crops and pasture. Sweetpotatoes, cotton, and rice are the principal crops. Farms in this association are small, ranging from 20 to 80 acres in size. The principal limitations are wetness in the Patoutville and Crowley soils and ponding on the Jeanerette soils.

Gently Sloping Soils

Three soil associations consist of gently sloping well-drained soils that are moderately permeable to moderately slowly permeable. These soils are on narrow drainage divides and adjoining sides of ridges along streams in the northern and eastern parts of the parish. Slopes range from 1 to 8 percent. These associations make up about 13 percent of the parish.

The gently sloping soils at high elevations in the northeastern part of the parish formed in thick deposits of pre-Prairie age loess. They are well-developed, loamy soils that have a low sand content.

The gently sloping soils at lower elevations in the eastern part of the parish formed in thin deposits of post-Prairie age loess. They are well-developed, brownish, loamy soils that have a fragipan.

The gently sloping soils at high elevations in the northwestern part of the parish formed on the Montgomery and Bentley age alluvial terraces. They are well-developed, brownish and reddish, acid, loamy soils that have a thick solum.

6. Evangeline-Dossman association

Loamy soils that have a reddish subsoil

This is an association of acid, gently sloping, loamy soils that have a high silt content. These soils are in the northern part of the parish. Elevations, which are some of the highest in the parish, are 100 to 140 feet above sea level.

This association makes up about 3 percent of the parish. It is about 86 percent Evangeline soils and about 12 percent Dossman soils. Calhoun and Duralde soils make up most of the remaining 2 percent.

Evangeline soils occupy the sides and broad tops of ridges. Their surface layer is very dark grayish-brown silt loam. The upper part of the subsoil is yellowish-red heavy silt loam and the lower part is brown silty clay loam mottled with red. Evangeline soils are moderately well drained and moderately slowly permeable.

Dossman soils occupy the sides and narrow tops of ridges. Their surface layer is brown silt loam. The subsoil is dark-red and red silty clay loam. Dossman soils are well drained and moderately slowly permeable.

The soils of this association are generally acid throughout the profile. All are low in natural fertility.

Most of the association is wooded. Some small areas have been cleared and are planted to crops and pasture plants. Farms in this association are 50 to 300 acres in size; the average size is about 100 acres. The principal limitations are the erosion hazard and low natural fertility.

7. Olivier association

Loamy soils that have a brownish subsoil

This is an association of acid, gently sloping, loamy soils that have a high silt content. These soils are in the eastern part of the parish. Elevations are dominantly 55 to 75 feet above sea level.

This association makes up about 2 percent of the parish. It is about 78 percent Olivier soils. Loring, McKamie, and Muskogee soils make up the remaining 22 percent.

Olivier soils occupy the sides and broad tops of ridges. Their surface layer is brown silt loam. The subsoil is dark yellowish-brown light silty clay loam mottled with gray in the upper part; the lower part is a dark yellowish-brown, heavy silt loam fragipan that is mottled with gray. Olivier soils are somewhat poorly drained and slowly permeable.

The soils of this association are generally strongly acid to medium acid. All are low to moderate in natural fertility.

Nearly all of the association is in crops and pasture. The major crops are sweetpotatoes and cotton. Farms in races. Some of the sandy soils are underlain by gravel deposits.

9. McKamie-Dossman-Kenney association

Well-drained soils that have a reddish clayey, loamy, or sandy subsoil

This is an association of acid, moderately steep, clayey, loamy, and sandy soils in the northern part of the parish. Elevations are dominantly 40 to 120 feet above sea level.

This association makes up about 3 percent of the parish. It is about 47 percent McKamie soils, 23 percent

This association makes up about 3 percent of the parish. It is about 98 percent Gallion soils. Latanier soils make up the remaining 2 percent.

Gallion soils occupy broad natural levees at the higher elevations near the bayou. Their surface layer is dark-brown silt loam or silty clay loam. The subsoil is red silty clay loam. They are well drained and moderately slowly permeable. They are medium acid to neutral in the surface layer and neutral to moderately alkaline in the subsoil.

Practically all of the association is used for crops, chiefly cotton, corn, and soybeans. Farms are dominantly 100 to 300 acres in size. There are no major limitations.

11. Moreland-Latanier association

Somewhat poorly drained, clayey soils of the Red River bottom land

This is an association of level, clayey soils on broad flats of the bottom land in the northeastern part of the parish. Elevations are dominantly 35 to 45 feet above sea level. Most of the association is subject to occasional flooding.

This association makes up about 6 percent of the parish. It is about 60 percent Moreland soils and 19 percent Latanier soils. Gallion and Perry soils make up the remaining 21 percent.

Moreland soils occupy some of the lowest local elevations. They have a dark-brown, clayey surface layer and a dark reddish-brown, clayey subsoil. They are somewhat poorly drained and very slowly permeable. Moreland soils are neutral to moderately alkaline throughout the profile.

[redacted]

the surface layer and medium acid to moderately alkaline in the subsoil.

Guyton soils have a light brownish-gray silt loam surface layer and a light brownish-gray silty clay loam subsoil that is mottled with yellowish brown. They are poorly drained and very slowly permeable. Guyton soils are very strongly acid to extremely acid throughout the profile.

Frost soils have a dark grayish-brown and gray silt loam surface layer and a dark-gray silty clay loam subsoil that is mottled with yellowish brown and light gray. They are poorly drained and slowly permeable. Frost soils are medium acid to very strongly acid in the surface layer and strongly acid to extremely acid in the subsoil.

Nearly all of the association is wooded and is in large tracts owned by timber companies. Frost soils are occasionally flooded for short periods, but can be managed for a few cultivated crops and pasture plants. The rest are not generally suited to cultivated crops because they are frequently flooded. The principal limitations are wetness and flooding.

13. Cascilla association

Frequently flooded, well-drained, loamy soils on small stream bottoms

This is an association of acid, nearly level to level, well-drained, loamy soils on bottom land in the northern part of the parish. These soils are subject to frequent flooding. Elevations are dominantly 45 to 100 feet above sea level.

[redacted]

wise stated, the colors given in the descriptions are those of a moist soil.

Following the name of each mapping unit is a symbol in parentheses. This symbol identifies the mapping unit on the detailed soil map. The suitability of each soil for crops and pasture, wildlife, and woodland is discussed in the mapping unit description.

The acreage and proportionate extent of each mapping unit are shown in table 1. Many of the terms used in describing soils can be found in the Glossary at the end of this survey, and more detailed information about the terminology and methods of soil mapping can be obtained from the Soil Survey Manual (7).

Acadia Series

The Acadia series consists of somewhat poorly drained, very gently sloping soils that have a clayey subsoil. These soils are in long, narrow areas along drainageways in the southern half of the parish.

In a representative profile, the surface layer is dark grayish-brown silt loam 5 inches thick. The subsurface layer is grayish-brown silt loam 4 inches thick. The subsoil is brownish-yellow silty clay loam that grades to light-gray clay at a depth of 30 inches.

Acadia soils are associated with Muskogee, McKamie, Wrightsville, Vidrine, Crowley, and Basile soils. They [illegible] than Muskogee and McKamie

tles; moderate, fine, granular structure; friable; few, medium, hard, black concretions; medium acid; abrupt, wavy boundary.

A2—5 to 9 inches, grayish-brown (2.5Y 5/2) silt loam; few, medium, distinct, yellowish-brown (10YR 5/6) mottles; weak, medium, subangular blocky structure; friable; medium acid; abrupt, wavy boundary.

B1—9 to 19 inches, brownish-yellow (10YR 6/6) silty clay loam; common, medium, distinct, light brownish-gray (2.5Y 6/2) mottles and few, medium, faint, yellowish-brown (10YR 5/6) mottles; weak, medium, subangular blocky structure; friable; few, fine, hard, black concretions; very strongly acid; clear, wavy boundary.

B2tg—19 to 30 inches, gray (10YR 6/1) clay; common, medium, distinct, yellowish-brown (10YR 5/6) mottles and few, fine, prominent, red mottles; weak, medium and fine, angular blocky structure; firm; few clay films and shiny ped surfaces; very strongly acid; clear, wavy boundary.

B3g—30 to 50 inches, light-gray (10YR 6/1) clay; common, medium, distinct, light yellowish-brown (10YR 6/4) and yellowish-brown (10YR 5/6) mottles; weak, medium, angular blocky structure; firm; very strongly acid; clear, wavy boundary.

Cg—50 to 70 inches, light-gray (10YR 6/1) clay; many, medium, distinct, yellowish-brown (10YR 5/8) mottles; massive; firm; slightly acid.

The A1 or Ap horizon ranges from dark grayish brown (10YR 4/2) to grayish brown (10YR 5/2) in color and from 4 to 8 inches in thickness. Where present, the A2 horizon has hues of 2.5Y or 10YR, value of 5 through 7, and chroma of 2 through 4; it is 2 to 6 inches thick. The B1 horizon is brownish yellow (10YR 6/6) or yellowish brown (10YR 5/4

to drainageways in the southern half of the parish. It is wet for extended periods after rains because permeability is very slow in the clayey subsoil. This soil has the profile described as representative of the series. Available water capacity is moderate. Generally, the content of nitrogen and phosphorus is very low, and the content of potassium is low. The surface layer is medium acid to very strongly acid, and the subsoil is strongly acid to very strongly acid. Runoff is medium.

Included in mapping are small areas of Wrightsville, Vidrine, Muskogee, McKamie, and Crowley soils.

About 75 percent of the acreage is wooded. A small

elevations on narrow flood plains, mostly in the southern half of the parish.

In a representative profile, the surface layer is gray silt loam 16 inches thick. The subsurface layer is light-gray silt loam 6 inches thick. The subsoil, to a depth of 50 inches, is silty clay loam. It is gray mottled with yellowish brown in the upper 10 inches and is light olive gray below.

Basile soils are associated with Cascilla, Frost, Guyton, and Wrightsville soils. They are more poorly drained than Cascilla soils, are less acid in the subsoil than Guyton and Frost soils, and are less clayey in the

The poorly drained Basile soil makes up about 60 percent of the acreage. It has the profile described as representative of the series. It is very strongly acid in the

The Caddo soils in Evangeline Parish are mapped only with Messer soils.

Representative profile of Caddo silt loam in an area of

acid in the surface layer and very strongly acid in the subsoil. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. Permeability and runoff are slow. Available water capacity is high.

The Messer soil is wet for a short but significant time after a rain. It occurs on mounds and microridges. The surface layer is silt loam. It is grayish brown in the upper part and pale brown in the lower part. The upper part of the subsoil is light yellowish-brown silt loam, and the lower part is yellowish-brown silty clay loam mottled with red and gray. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. This soil is strongly acid in the surface layer and very strongly acid in the subsoil. Permeability is slow, and runoff is medium. Available water capacity is high.

Included in mapping are small areas of Glenmora and Guyton soils.

About 90 percent of the acreage is wooded. A small acreage has been cleared for crops and pasture. The soil on the intermounds is saturated in winter and early in spring, but lacks adequate moisture for plants during dry periods in some years. The principal limitations are wetness and low fertility.

Crops and pasture.—These soils are moderately well suited to most locally grown crops and pasture plants. Suitable crops are rice, soybeans, grain sorghum, and cotton. Suitable pasture plants are bermudagrass, Pensacola bahiagrass, ryegrass, white clover, and vetch.

The soils are well suited to flood irrigation. They are fairly easy to work and to keep in good tilth, but a crust is likely to form after heavy rains. If the soils are under continuous cultivation, a plowpan is likely to form. The small mounds interfere with tillage.

Tilth can be improved by adding organic matter from crop residue and by growing grasses and legumes in rotation with other crops. Water planting of rice generally overcomes the effects of crusting. Subsoiling and chiseling help prevent the formation of a plowpan.

Land smoothing and water leveling increase the efficiency of flood irrigation and improve drainage. Proper row direction is needed to improve drainage where row crops are grown. Response to fertilizer is good. Lime is needed. Capability unit IIIw–1.

Wildlife.—There are only a few, small open areas on these soils. The Messer soil is suitable habitat for quail, dove, rabbit, and other openland wildlife. The Caddo soil provides poor habitat. The Caddo soil is well suited and the Messer soil is suited to woodland management for rabbit, deer, and squirrel. Small open areas planted to winter pasture plants provide a good supply of food for deer. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. Both soils are well suited as habitat for ducks, geese, crawfish, snipe, and other wetland wildlife.

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the sedges, rushes, uniolas, and low panicums are left. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Caddo-Messer complex, undulating (CaB).—These poorly drained and moderately well drained soils are in the northwestern part of the parish. The Caddo soil makes up about 40 percent of the acreage, and the Messer soil 35 percent.

The wet Caddo soil occurs in the intermound and swale areas. The surface layer is thick, gray silt loam, and the subsoil is gray silty clay loam mottled with red and yellowish brown. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. Permeability and runoff are slow. Available water capacity is high.

The Messer soil, which is wet for a short but significant time after a rain, is on mounds and small ridges. It has the profile described as representative for the series. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. The surface layer is strongly acid, and the subsoil is very strongly acid. Permeability is slow, and runoff is medium. Available water capacity is high.

Included in mapping are fairly large areas of Glenmora and Guyton soils that make up 25 percent of the mapping unit.

About 90 percent of the acreage is wooded. A small acreage has been cleared for crops and pasture. The soils are saturated in winter and spring, but lack adequate moisture for plants during dry periods in some years. The principal limitations are wetness, the erosion hazard, and low fertility.

Crops and pasture.—These soils are moderately well suited to most locally grown crops and pasture plants. Suitable crops are rice, soybeans, grain sorghum, and cotton. Suitable pasture plants are bermudagrass, Pensacola bahiagrass, ryegrass, white clover, and vetch.

These soils are fairly well suited to flood irrigation. They are fairly easy to work and to keep in good tilth, but a crust is likely to form after a heavy rain. If the soils are under continuous cultivation, a plowpan is likely to form. The small mounds interfere with tillage.

Tilth can be improved by adding organic matter from crop residue and by growing grasses and legumes in rotation with other crops. Water planting of rice helps to overcome the effects of crusting. Subsoiling and chis-

Wildlife.—Open areas are few and small on these soils but provide habitat suited to quail, dove, rabbit, and other openland wildlife. The soils are well suited to woodland management for rabbit, deer, and squirrel. Small open areas planted to winter pasture plants furnish a good supply of food for deer. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. Both soils are suitable habitat for duck, goose, crawfish, swine

inches; very strongly acid; abrupt, irregular boundary.

B21tg—20 to 29 inches, light brownish-gray (2.5Y 6/2) silty clay loam; common, medium, distinct, yellowish-brown (10YR 5/8) mottles; weak, medium, subangular blocky structure; friable; few fine roots; common fine pores; patchy thin clay films on ped surfaces and in pores; common, medium, hard, black and brown concretions; very strongly acid; gradual, wavy boundary.

IIB22tg—29 to 70 inches, light brownish-gray (2.5Y 6/2) silty

in rotation with other crops. Subsoiling and chiseling help prevent the formation of a plowpan.

Response to fertilizer is good. Lime is needed, especially in pasture rotation. Capability unit IIIw–3.

Wildlife.—Open areas are few and small on this soil and are poor habitat for quail, dove, rabbit, and other openland wildlife. This soil is well suited to woodland management for deer, squirrel, and rabbit. Small open areas planted to winter pasture plants provide a good supply of food for deer. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. This soil is also well suited as habitat for duck, geese, crawfish, snipe, and other wetland wildlife.

Woodland.—The principal trees on this soil are oak, sweetgum, and loblolly pine. Trees suitable for planting are slash and loblolly pines. Potential productivity on this soil is very high. The site index for loblolly pine is 98. Seedling mortality is moderate. Because of wetness in winter and spring, restrictions on the use of equipment are severe.

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, chalky bluestem, plumegrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas and low panicums are left. Potential forage production per acre for woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Calhoun-Duralde complex (Cn).—These level and nearly level, poorly drained and somewhat poorly drained soils are in broad areas of the northeastern part of the parish. The Calhoun soil makes up about 60 percent of the acreage and the Duralde soil 30 percent.

The Calhoun soil is wet most of the time. It has slow runoff and becomes waterlogged after a rain. The surface layer is gray silt loam. The subsoil is gray silty clay loam mottled with yellowish brown. The surface layer is strongly acid, and the subsoil is very strongly acid. Generally, the content of nitrogen, phosphorus, calcium, and potassium is very low. Permeability is slow. Available water capacity is high.

The Duralde soil is on mounds and microridges. It also is wet for a significant period after a rain because it becomes waterlogged. This soil has the profile described as representative for the series. It is medium acid in the surface area and very strongly acid in the subsoil. Permeability and runoff are slow. Available water capacity is high.

Included in mapping are small areas of Evangeline and Frost soils that make up the rest of the acreage.

About 85 percent of the acreage is wooded. A small acreage has been cleared for crops and pasture. The soils are saturated in winter and early in spring, but lack adequate moisture for plants during dry periods in some years. The principal limitations are wetness and low fertility.

Crops and pasture.—These soils are moderately well suited to most locally grown crops and pasture plants. Suitable crops are sweetpotatoes, soybeans, cotton, grain sorghum, and truck crops. Suitable pasture plants are common bermudagrass, Pensacola bahiagrass, ryegrass, white clover, and vetch.

The soils are easy to work and to keep in good tilth, but a crust is likely to form after a heavy rain. If the soils are under continuous cultivation, a plowpan is likely to form. The small mounds interfere with tillage. Tilth can be improved by adding organic matter from crop residue and by growing grasses and legumes in rotation with other crops. Subsoiling and chiseling help prevent the formation of a plowpan. Where row crops are grown, land smoothing and proper row direction are needed to improve drainage. The response to fertilizer is good. Lime is needed. Capability unit IIIw–3.

Wildlife.—Open areas are few and small on these soils. The Duralde soil is suitable habitat for quail, dove, rabbit, and other openland wildlife. The Calhoun soil is poorly suited. The Calhoun soil is well suited to woodland management for deer, rabbit, and squirrel. The Duralde soil is suited. Small open areas planted to winter pasture plants provide a good supply of food for deer. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. Both soils are well suited as habitat for ducks, crawfish, snipe, and other wetland wildlife.

Woodland.—The principal trees are loblolly pine, oak, and sweetgum. Trees suitable for planting are loblolly and slash pines. Potential productivity is very high. The site index for loblolly pine is 98 on both soils. Seedling mortality is moderate on the Calhoun soil and slight on the Duralde soil. Because of wetness in winter and spring, restrictions on the use of equipment are severe on the Calhoun soil and moderate on the Duralde soil.

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the sedges, rushes, uniolas, and low panicums are left. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Cascilla Series

The soils of the Cascilla series are well-drained, acid, and loamy throughout. They are at lower elevations on narrow flood plains in the northern part of the parish.

In a representative profile, the surface layer is dark-brown silt loam 4 inches thick. The next layer also is silt loam. It is brown in the upper 9 inches, dark brown in the next 27 inches, and pale brown below.

Cascilla soils are associated with Guyton, Frost, and Basile soils. They are better drained and browner than those soils.

Representative profile of Cascilla silt loam, frequently flooded, about 8 miles north of Ville Platte, 200 feet north of road in the Bayou Chicot Bottom, sec. 14, T. 3 S., R. 1 E.:

A1—0 to 4 inches, dark-brown (10YR 4/3) silt loam; very weak, fine, granular structure; very friable; many

fine and medium roots; few, very fine, hard, black concretions; strongly acid; clear, wavy boundary.

B1—4 to 13 inches, brown (10YR 5/3) silt loam; few, fine, faint, pale-brown mottles; weak, medium, subangular blocky structure; friable; common fine roots; common fine pores; few, fine, soft, black and brown concretions; very strongly acid; gradual, wavy boundary.

B2—13 to 40 inches, dark-brown (7.5YR 4/4) silt loam; common, medium, distinct, pale-brown (10YR 6/3) mottles; moderate, medium, subangular blocky structure; friable; few fine roots; common fine and medium pores; patchy black stains on ped faces; very strongly acid; gradual, wavy boundary.

B3—40 to 60 inches, pale-brown (10YR 6/3) silt loam; many, coarse, faint, light brownish-gray (10YR 6/2) mottles; weak, medium, subangular blocky structure; friable, slightly brittle; many fine and medium pores lined with patchy thin clay films and silt; few, fine, soft, brown concretions; very strongly acid.

The A horizon is dark grayish brown (10YR 4/2), dark brown, or brown (10YR 4/3) and ranges from 2 to 6 inches in thickness. The B horizon is brown (10YR 4/3, 5/3), yellowish brown (10YR 5/4, 5/6), light yellowish brown (10YR 6/4), or dark brown (7.5YR 4/4) mottled with pale brown and light brownish gray. The A horizon is medium acid to strongly acid and the B horizon is strongly acid to very strongly acid.

[redacted]

Crowley Series

The Crowley series consists of poorly drained to somewhat poorly drained, nearly level soils that have a clayey subsoil. These soils occur in broad, slightly convex areas at higher elevations in the southwestern half of the parish.

In a representative profile, the surface layer is dark grayish-brown silt loam 8 inches thick. The subsurface layer is grayish-brown silt loam 12 inches thick. The subsoil is grayish silty clay mottled with red and yellowish brown to a depth of more than 50 inches.

Crowley soils are associated with Mamou, Mowata, Midland, and Vidrine soils. They are more poorly drained and have more clay in the subsoil than Mamou soils. They have a coarser textured surface layer than Midland soils. They are better drained than Mowata soils and are more poorly drained than Vidrine soils.

The Crowley soils in Evangeline Parish are mapped only with Vidrine soils.

Representative profile of Crowley silt loam in an area of Crowley-Vidrine complex, 1.5 miles northwest of Mamou, 260 feet north of road intersection, 40 feet west of power line pole No. 35, NE¼SE¼ sec. 39, T. 4 S., R. 1 W.:

to silty clay loam. The A horizon is very strongly acid to medium acid. The B horizon is very strongly acid in the upper part and neutral to moderately alkaline in the lower part.

Crowley-Vidrine complex (Cv).—These nearly level, poorly drained to somewhat poorly drained soils are on broad, slightly convex areas in the southwestern part of the parish. The Crowley soil makes up about 65 percent of the acreage, and the Vidrine soil 30 percent.

The Crowley soil is wet for extended periods because runoff is slow and permeability is very slow in the high. The site index for loblolly pine is 93. Seedling mortality is moderate on the Crowley soil and slight on the Vidrine soil. Because of wetness in winter and spring, restrictions on the use of equipment are severe on Crowley soil and moderate on Vidrine soil.

Properly managed wooded areas can support a good cover of understory vegetation that cattle can graze. Major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of

less than 1 millimeter thick on vertical ped surfaces; few, very fine, soft, black concretions; very strongly acid; gradual, wavy boundary.

C—72 to 106 inches, dark-brown (7.5YR 4/4) silt loam; very weak, coarse, prismatic structure; very friable; few, patchy, thin silt coats along vertical cracks; few, very fine, hard, brown concretions; strongly acid.

The A horizon is brown (10YR 4/3, 5/3; 7/5YR 4/2, 5/2, 4/4, 5/4) or yellowish brown (10YR 5/4, 5/6) and is 3 to 6 inches thick. The Ap horizon ranges from silt loam to silty

tolerant plants disappear, and the uniolas and low panicums remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,300 pounds air-dry weight.

Dossman soils, 8 to 30 percent slopes (DsE).—These are sloping to steep, well-drained silt loams along the upper valley walls in the northeastern part of the parish. The surface layer in most places is brownish silt

as very small mounds. They are in the northern part of the parish.

In a representative profile, the surface layer is dark grayish-brown silt loam 4 inches thick. The subsoil is yellowish-brown silt loam to a depth of 21 inches, dark-brown silty clay loam to a depth of 36 inches, and yellowish-brown silty clay loam below.

Duralde soils are associated with Calhoun, Evangeline, and Frost soils. They are better drained than Calhoun and Frost soils and have a browner subsoil. They are more poorly drained than Evangeline soils.

Representative profile of a Duralde silt loam in an area of Calhoun-Duralde complex, about 10 miles north of Ville Platte, 300 feet east of gravel road in sec. 1, T. 3 S., R. 2 E.:

A1—0 to 4 inches, dark grayish-brown (10YR 4/2) silt loam; few, fine, faint, gray mottles; weak, fine, granular structure; very friable; many fine roots; many, medium, soft, brown concretions; medium acid; clear, wavy boundary.

B1—4 to 21 inches, yellowish-brown (10YR 5/4) silt loam; common, medium, faint, pale-brown (10YR 6/3) mottles; moderate, medium, subangular blocky structure; friable; few fine roots; few fine pores lined with white silt; many, medium, soft, black and brown concretions; very strongly acid; clear, irregular boundary.

Bt&A'2—21 to 25 inches, dark-brown (10YR 4/3) silty clay loam; few, medium, distinct, yellowish-brown (10YR 5/6) mottles and few, fine, faint, grayish-brown mottles; moderate, medium, subangular blocky structure; firm; few fine roots along ped surfaces; many fine pores; patchy thin clay films on horizontal ped surfaces; 20 percent is pale-brown (10YR 6/3) silt coats and discontinuous silt pockets; many, medium, soft, brown concretions; very strongly acid; clear, wavy boundary.

B21t—25 to 36 inches, dark-brown (10YR 4/3) silty clay loam; common, medium, faint, grayish-brown (10YR 5/2) mottles; moderate, medium, subangular blocky structure; firm; many fine pores; continuous thin clay films on ped surfaces; thin silt coats on vertical ped surfaces; common, medium, soft, brown concretions; very strongly acid; gradual, wavy boundary.

B22t—36 to 60 inches, yellowish-brown (10YR 5/4) silty clay loam; common, medium, faint, yellowish-brown (10YR 5/8) mottles; moderate, medium, subangular blocky structure; firm; few fine roots along ped surfaces; common fine pores lined with clay; continuous thick clay films on ped surfaces; common, fine, soft, brown concretions; very strongly acid; gradual, wavy boundary.

B23t—60 to 92 inches, yellowish-brown (10YR 5/4) silty clay loam; common, medium, faint, yellowish-brown (10YR 5/8) mottles; moderate, medium, subangular blocky structure; firm; few fine pores lined with clay; continuous thin clay films on ped surfaces, silt coats on vertical ped surfaces; common, medium, soft, brown concretions; neutral.

The A horizon is dark grayish brown (10YR 4/2), brown (10YR 4/3, 5/3), yellowish brown (10YR 5/4), pale brown (10YR6/3), or light yellowish brown (10YR 6/4). It ranges from 2 to 5 inches in thickness. The B1 horizon is brown (10YR 5/3), yellowish brown (10YR 5/4, 5/6), pale brown (10YR 6/3), or light yellowish brown (10YR 6/4). It ranges from 15 to 20 inches in thickness. The Bt horizon is as much as 50 percent pale-brown (10YR 6/3) or light-gray (10YR 7/2) discontinuous A2 horizon of silt loam that occurs as tongues around Bt horizon peds. The Bt horizon is dark brown (10YR 4/3), brown (10YR 5/3), or yellowish brown (10YR 5/4, 5/6) and has few to many grayish mottles. It ranges from silt loam to silty clay loam. The A horizon is medium acid to very strongly acid. The B1 horizon is strongly acid to very strongly acid and grades to neutral in the lower part of the Bt horizon.

Duralde silt loam, 1 to 3 percent slopes (DuB).—This soil is adjacent to drainageways in the northern part of the parish. It is wet for extended periods because permeability is slow in the lower part of the subsoil. The surface layer is dark grayish-brown silt loam. The subsurface layer is yellowish-brown silt loam, and the subsoil is dark-brown silty clay loam mottled with grayish brown and yellowish brown. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. The soil is medium acid to very strongly acid in the surface layer and upper part of the subsoil and grades to neutral in the lower part. Runoff is medium. Available water capacity is high.

Included in mapping are small areas of Calhoun, Evangeline, and Frost soils.

About 90 percent of the acreage is wooded. A small acreage has been cleared for crops and pasture. The soil is saturated in winter and spring, but lacks adequate moisture for plants during dry periods in some years. The principal limitations for crops are low fertility, wetness, and the erosion hazard.

Crops and pasture.—This soil is moderately well suited to most locally grown crops and pasture plants. Suitable crops are sweetpotatoes, cotton, soybeans, and grain sorghum. Suitable pasture plants are bermudagrass, Pensacola bahiagrass, ryegrass, white clover, and vetch.

The soil is fairly easy to keep in good tilth, but a crust is likely to form after a heavy rain. If the soil is under continuous cultivation, a plowpan is likely to form.

Where row crops are grown, land smoothing and proper row direction are needed to control erosion and conserve moisture. Tilth can be improved by adding organic matter from crop residue and by growing grasses and legumes in rotation with other crops. Subsoiling and chiseling help to prevent the formation of a plowpan.

Response to fertilizer is good. Lime is needed. Capability unit IIw–1.

Wildlife.—The few, small open areas are suitable habitat for quail, dove, and rabbit. Grainfields and pasture areas attract these species. This soil is suited to woodland management for rabbit, deer, and squirrel. Small areas planted to winter pasture plants provide a good supply of food for deer. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. The soil is suitable habitat for ducks, crawfish, snipe, and other wetland wildlife.

Woodland.—The principal trees are loblolly pine, oak, sweetgum, and hickory. Trees suitable for planting are loblolly and slash pines. Potential productivity is very high. The site index for loblolly pine is 98. Seedling mortality is slight. Restrictions on the use of equipment are moderate because the soil is wet in winter and spring.

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas, rushes, sedges, and low panicums are left. Potential forage pro-

duction per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Evangeline Series

The Evangeline series consists of moderately well drained, loamy soils. These soils are on the broad tops and the sides of ridges at higher elevations in the northern part of the parish.

In a representative profile, the surface layer is very dark grayish-brown silt loam 3 inches thick, and the subsurface layer is dark yellowish-brown silt loam 4 inches thick. The subsoil is strong-brown and yellowish-red silt loam in the upper 16 inches and reddish-brown and brown silty clay loam below.

Evangeline soils are associated with Calhoun and Dur-[redacted]

B'3t—63 to 80 inches, brown (7.5YR 4/4) silty clay loam; moderate, medium, subangular blocky structure; friable; few fine pores lined with clay; continuous thick clay films and patchy black stains on ped surfaces; thin silt coats on vertical ped surfaces; medium acid.

The Ap or A1 horizon ranges from very dark grayish brown (10YR 3/2) to brown (10YR 5/3) in color and from 2 to 5 inches in thickness. The A2 horizon, where present, ranges from dark grayish brown (10YR 4/2) to light yellowish brown (10YR 6/4) in color and from 3 to 8 inches in thickness. The upper part of the Bt horizon is yellowish red (5YR 4/4, 4/8, 5/6, 5/8) or strong brown (7.5YR 5/6, 5/8). It is silt loam or silty clay loam and ranges from 15 to 80 inches in thickness. A discontinuous A'2 horizon of pale-brown (10YR 6/3) silt loam interfingers in the upper part of the Bt horizon. The lower part is brown (10YR 5/3), (7.5YR 4/4, 5/4), yellowish brown (10YR 5/4), dark yellowish brown (10YR 4/4), reddish brown (5YR 4/4, 5/4), or yellowish red (5YR 4/6, 4/8). The A horizon is slightly acid to very strongly acid, and the B horizon is medium acid to very

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, purpletop, cutover muhly, uniola, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas and low panicums are left. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,300 pounds air-dry weight.

Frost Series

The Frost series consists of poorly drained, acid soils on broad drainageways and in low areas in the northern and northeastern parts of the parish.

In a representative profile, the surface layer is dark

representative for the series. Generally, the content of nitrogen, phosphorus, potassium, and calcium is low or very low. The surface layer and subsoil are very strongly acid, and lower layers are strongly acid. Available water

A3—6 to 13 inches, reddish-brown (5YR 4/3) silt loam; weak, medium, subangular blocky structure; firm; few fine roots; few fine pores lined with clay; few silt coats on vertical ped faces; slightly acid; gradual, wavy boundary.

slight, and restrictions on the use of equipment are slight. Wooded areas should not be grazed.

Gallion silty clay loam (Gc).—This nearly level soil is in narrow areas at intermediate elevations along Bayou Cocodrie. It is wet for a short but significant time after a rain because runoff is slow and permeability is moderately slow. The surface layer is brown or dark-brown silty clay loam, and the subsoil is yellowish-red or reddish-brown very fine sandy loam. The surface layer is slightly acid, and the subsoil is moderately alkaline. Available water capacity is high.

Included in mapping are small areas of Gallion silt loam and areas of Latanier and Moreland soils.

About 65 percent of the acreage is used for crops and pasture and 35 percent for woodland. The principal limitation for crops is the excess surface water.

Crops and pasture.—This soil is moderately well suited to most crops and pasture plants grown locally. Moderately well suited crops are cotton, corn, and soybeans. Rice is well suited. Suitable pasture plants are common bermudagrass, dallisgrass, Pensacola bahiagrass, ryegrass, vetch, and white clover.

The soil is fairly easy to keep in good tilth, but if it is

Glenmora soils are associated with Caddo, Messer, Savannah, and Ruston soils. They are better drained than the Caddo soils. They are more poorly drained than the Ruston and Messer soils. In contrast with Savannah soils, they do not have a fragipan.

Representative profile of Glenmora silt loam, 1 to 3 percent slopes, about 5 miles west of Pine Prairie, 45 feet north of roadbank, SW¼ sec. 17, T. 3 S., R. 1 W.:

A1—0 to 6 inches, dark grayish-brown (10YR 4/2) silt loam; weak, fine, granular structure; friable; common fine roots; few fine pores; common, fine, soft, black concretions; very strongly acid; clear, irregular boundary.

A2—6 to 10 inches, pale-brown (10YR 6/3) silt loam; weak, coarse, subangular blocky structure; friable; common fine roots; common, fine, soft, brown concretions; very strongly acid; clear, broken boundary.

B1—10 to 14 inches, yellowish-brown (10YR 5/6) silt loam; common, medium, distinct, light brownish-gray (10YR 6/2) mottles; weak, medium, subangular blocky structure; friable; few fine roots; common, medium voids lined with white silt; common, fine, soft, brown concretions; very strongly acid; gradual, wavy boundary.

B21t—14 to 25 inches, mottled yellowish-brown (10YR 5/4) and pale-brown (10YR 6/3) silty clay loam; few, me-

Glenmora silt loam, 1 to 3 percent slopes (GeB).—This soil is in broad areas in the northwestern part of the parish. It is wet for a short but significant time after a rain because permeability is slow in the lower part of the subsoil. This soil has the profile described as representative for the series. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. The surface layer and subsoil are very strongly acid. Runoff is medium, and the available water capacity is high.

Included in mapping are small areas of Caddo, Messer, Ruston, and Savannah soils.

About 80 percent of the acreage is wooded. Some areas have been cleared for crops and pasture. The subsoil is saturated in winter and early in spring, but lacks adequate moisture for plants during dry periods late in summer and in fall of some years. The principal limitations are low fertility and the erosion hazard.

Crops and pasture.—This soil is moderately well suited to most crops and pasture plants grown locally. Suitable crops are rice, soybeans, grain sorghum, and cotton. Soybeans and rice are the principal crops. Suitable pasture plants are Pensacola bahiagrass, bermudagrass, dallisgrass, and white clover.

The soil is suited to flood irrigation. It is fairly easy [illegible] but a crust is likely to form after [illegible]

per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Guyton Series

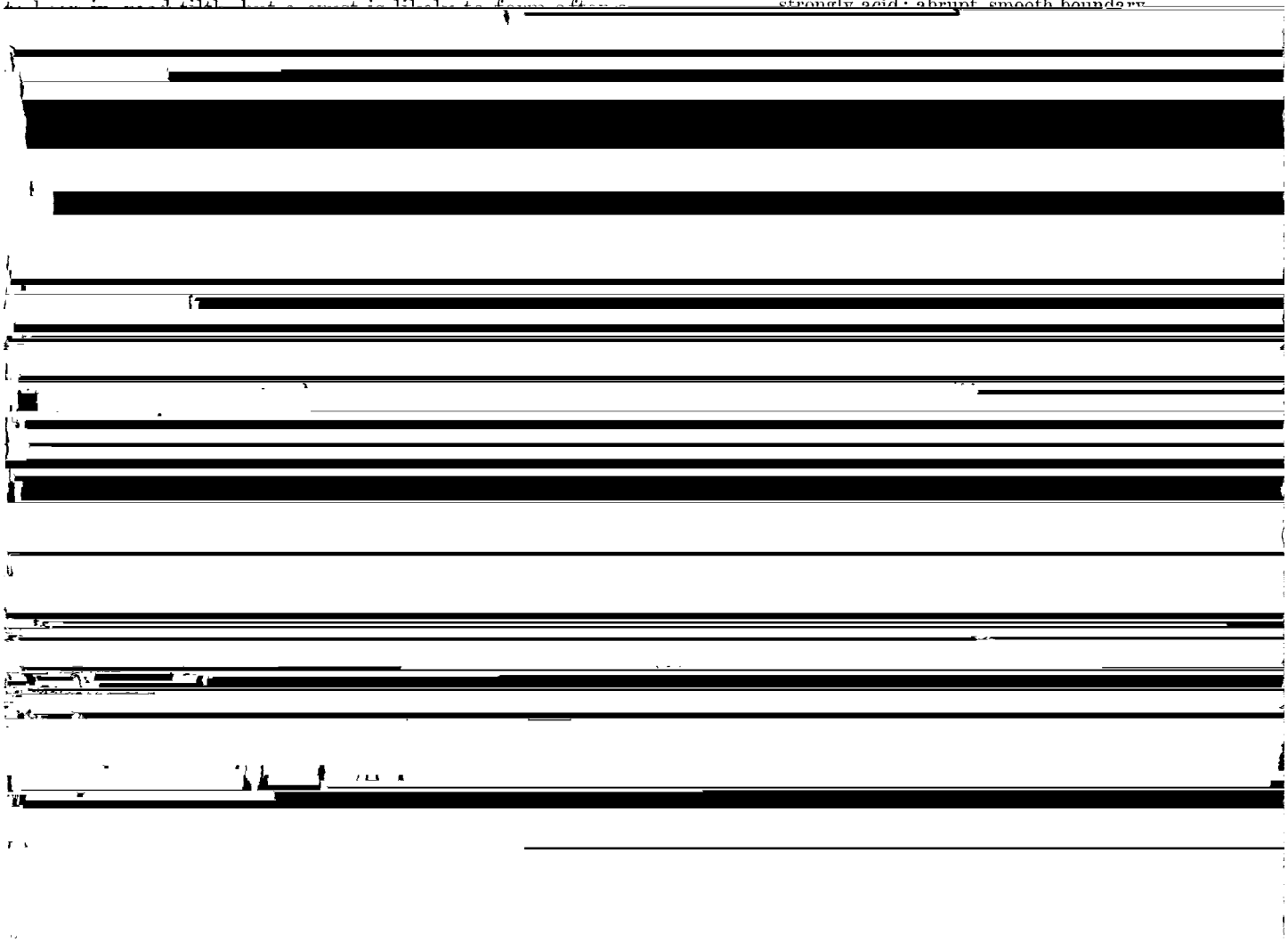
The Guyton series consists of poorly drained, acid soils in broad depressions and in drainageways throughout the parish.

In a representative profile, the surface and subsurface layers are light brownish-gray and light-gray silt loam that extends to a depth of 30 inches. The subsoil is light brownish-gray silty clay loam mottled with yellowish brown to a depth of 40 inches. Below this is light-gray and gray silty clay loam.

Guyton soils are associated with Caddo, Messer, Glenmora, and Cascilla soils. They are more poorly drained and grayer than Messer, Glenmora, and Cascilla soils. They do not have red mottles, which are typical of Caddo soils.

Representative profile of Guyton silt loam, occasionally flooded, about 9 miles west of Turkey Creek, 150 feet south of road intersection, 90 feet east of road, sec. 27, T. 2 S., R. 2 W.:

A1—0 to 2 inches, light brownish-gray (10YR 6/2) silt loam; weak, fine, granular structure; firm, brittle; very strongly acid; abrupt, smooth boundary.



slow, and runoff is very slow to ponded. Available water capacity is high.

Included in mapping are small areas of Caddo, Messer, and Glenmora soils.

Most of the acreage is wooded. Flooding occurs mostly in winter and spring, but available moisture is inadequate during dry periods late in summer and in fall in many years. The principal limitations are flooding, low fertility, and wetness.

Crops and pasture.—Flooding is too severe for most crops in most years. Rice, soybeans, and grain sorghum can be grown if they are planted late and flooding can be controlled. Common bermudagrass is a suitable pasture plant. Response to fertilizer is poor. Lime is needed for pasture and cropland. Capability unit IVw–1.

Wildlife.—Open areas are few. This soil is not suitable habitat for openland wildlife, but it is well suited to woodland management for deer, squirrel, and rabbit. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. The soil is also well suited as habitat for ducks, crawfish, snipe, and other wetland wildlife.

Woodland.—The principal trees are water oak, pin oak, and willow oak and some sweetgum and loblolly pine. Trees suitable for commercial planting are oak, gum, and slash and loblolly pines. Potential productivity is high. The site index for loblolly pine is 90. Seedling mortality is moderate. Because of wetness and occasional flooding, restrictions on the use of equipment are severe.

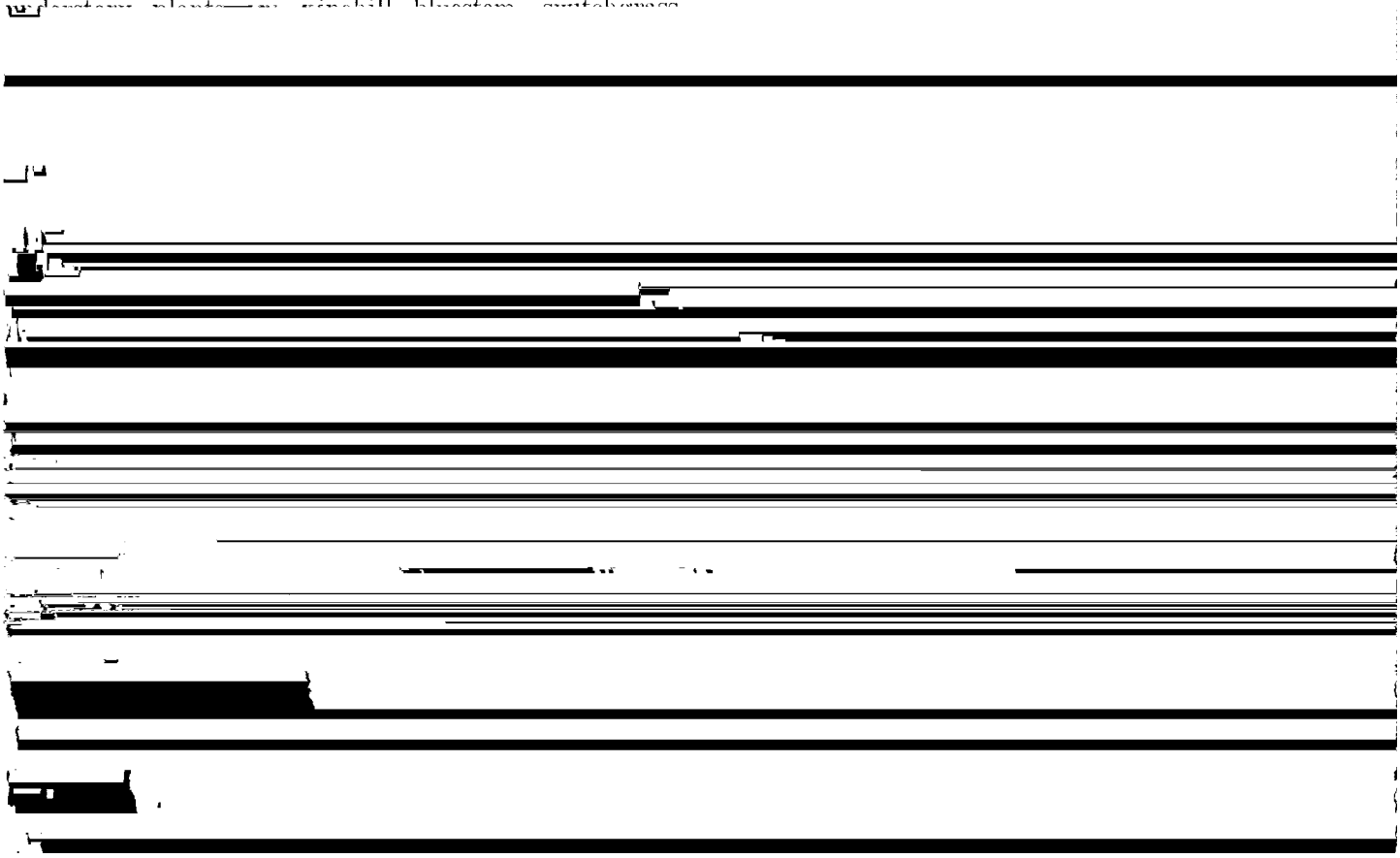
Well-managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are [illegible]

Almost all the acreage is wooded. Floodwaters ranging from 1 to 8 feet in depth inundate these soils for periods of a few hours to 10 days, generally one to six times a year. The supply of soil moisture, however, is inadequate during dry periods in some years. The principal limitations are frequent flooding, wetness, and low fertility.

Crops and pasture.—Flooding is too severe for cultivated crops in most years. Small areas have been cleared for pasture. Common bermudagrass is a suitable pasture plant. Pasture plants respond fairly well to fertilizer. Lime is needed. Capability unit Vw–3.

Wildlife.—There are only a few, small open areas. The Cascilla soil is poorly suited as habitat for quail, dove, rabbit, and other openland wildlife. The Guyton soil is not suited. Both soils are well suited as habitat for deer, squirrel, rabbit, and other woodland wildlife. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. The soils are also well suited as habitat for ducks, crawfish, snipe, and other wetland wildlife.

Woodland.—The principal trees are sweetgum, loblolly pine, water oak, and baldcypress. Trees suitable for commercial planting are cottonwood, sycamore, and loblolly and slash pines. Potential productivity is high on the Guyton soil and very high on the Cascilla soil. The site index for loblolly pine is 90 on the Guyton soil and 102 on the Cascilla soil. Seedling mortality is moderate on the Guyton soil and slight on the Cascilla soil. Restrictions on the use of equipment are severe on the Guyton soil and slight on the Cascilla soil. Wooded areas should not be grazed.



B22tgca—18 to 32 inches, dark-gray (10YR 4/1) silty clay loam; many, medium, distinct, light olive-brown

In a representative profile, the surface layer is dark gravish-brown fine sand about 6 inches thick. The subsoil

moderately high. The site index for slash pine is 82. Seedling mortality is moderate. Restrictions on the use of equipment are moderate because of poor trafficability.

Well-managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, purpletop, slender bluestem, three-awn, uniola, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas and low panicums remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,200 pounds air-dry weight.

Latanier Series

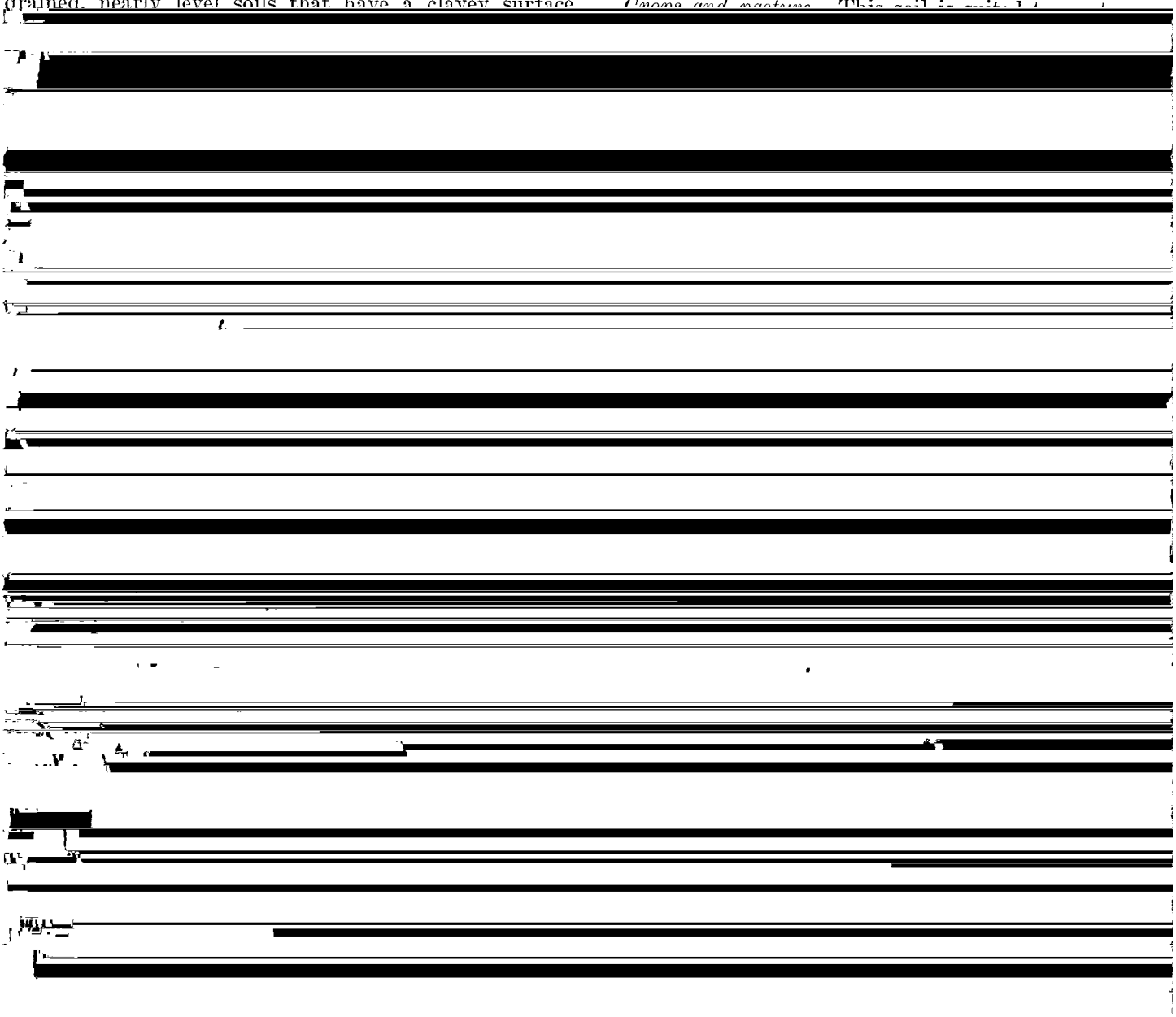
The Latanier series consists of somewhat poorly drained, nearly level soils that have a clayey surface

Latanier clay (la).—This nearly level soil is on bottom land at intermediate elevations in the northeastern part of the parish. It is wet for significant periods because runoff is slow and permeability is very slow. This soil has the profile described as representative for the series. Available water capacity is moderate. Generally, this soil has a low content of nitrogen, a high content of phosphorus, and a medium content of potassium. It is slightly acid in the surface layer and mildly alkaline or moderately alkaline in the underlying layers.

Included in mapping are areas of Gallion soil and small areas of Moreland and Perry soils.

About half the acreage is in crops and pasture. The rest is mostly wooded. The soil is wet in winter and spring, but soil moisture is inadequate during dry periods in most years. The principal limitations are wetness and poor tilth.

Crops and pasture.—This soil is suitable [illegible]



loam. At a depth of 23 inches is a thick, brownish fragipan.

Loring soils are associated with Olivier, Muskogee, and McKamie soils. They are better drained than Olivier soils. They differ from Muskogee soils in being better drained and in not having a clayey subsoil. They are not so well drained as McKamie soils.

Representative profile of Loring silt loam, 3 to 5 percent slopes, eroded, about 5 miles east of Ville Platte in the northeast corner of sec. 55, T. 4 S., R. 3 E.:

Ap—0 to 5 inches, brown (10YR 4/3) silt loam; weak, fine, granular structure; friable; many fine roots; common, fine, soft, brown concretions; medium acid; abrupt, smooth boundary.

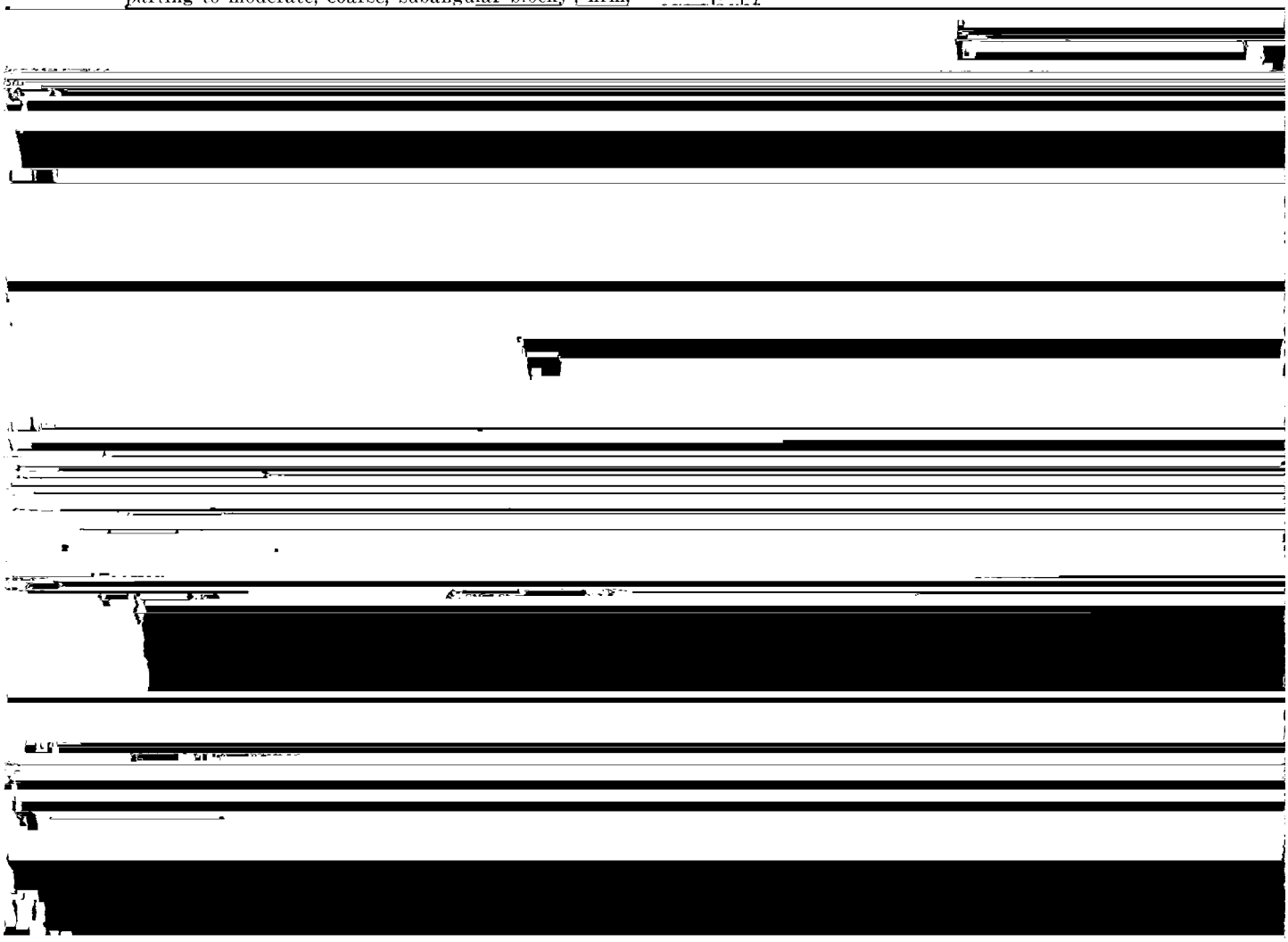
B21t—5 to 23 inches, brown (7.5YR 4/4) silty clay loam; moderate, medium and fine, subangular blocky structure; friable; few fine roots; few fine pores lined with clay; continuous thick clay films and common, patchy, black stains on ped surfaces; few, fine, soft, black concretions; strongly acid; gradual, wavy boundary.

Bx1—23 to 42 inches, dark yellowish-brown (10YR 3/4) and brown (7.5YR 5/4) silt loam, pale-brown (10YR 6/3) ped surfaces; moderate, coarse, prismatic structure parting to moderate, coarse, subangular blocky; firm,

grass, Pensacola bahiagrass, and white clover. The soil is easy to till and to keep in good tilth, but if it is cultivated to the same depth every year, a plowpan can form. If it is clean tilled, terracing, contour cultivation, or stripcropping is needed to control runoff and reduce the hazard of erosion. Subsoiling and chiseling help to prevent the formation of a plowpan. Response to fertilizer is good. Capability unit IIIe-2.

Wildlife.—This soil is suitable habitat for dove, quail, rabbit, and other openland wildlife. Planting winter pasture plants on the edges of fields that border wooded areas provides a good supply of food for deer and rabbit. The soil is suitable habitat for deer, squirrel, rabbit, and other woodland wildlife. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. This soil is not suitable habitat for wetland wildlife.

Woodland.—The principal trees are oak, green ash, and sweetgum. Trees suitable for commercial planting are slash and loblolly pines. Potential productivity is high. The site index for loblolly pine is 95. Seedling mortality is slight. Restrictions on the use of equipment



B2tg—11 to 19 inches, mottled dark-gray (10YR 4/1), very dark gray (10YR 3/1), and dark-red (2.5YR 3/6) silty clay loam; ped surfaces are very dark gray (10YR 3/1); weak, coarse, prismatic structure parting to strong, medium, subangular blocky; firm; common fine roots along ped surfaces; continuous thick clay films on ped surfaces; few very fine pores; few, fine, soft, black and brown concretions; slightly acid; clear, wavy boundary.

B3tg—19 to 26 inches, yellowish-brown (10YR 5/4) silty clay loam; dark grayish-brown (10YR 4/2) ped surfaces; moderate, medium, subangular blocky structure; firm; few fine pores; continuous thick clay films and patchy black stains on ped surfaces; few, fine, soft, red and black concretions; slightly acid; diffuse, wavy boundary.

C—26 to 64 inches, mottled light yellowish-brown (10YR 6/4) and yellowish-brown (10YR 5/4) loam; common, medium, distinct, strong-brown (7.5YR 5/8) mottles; massive; firm; few, medium, hard, brown concretions with red interiors; neutral.

The Ap horizon is dark gray (10YR 4/1), gray (10YR 5/1), grayish brown (10YR 5/2), or dark grayish brown (10YR 4/2). The A2 horizon is brown (10YR 4/3, 5/3), pale brown (10YR 6/3), dark yellowish brown (10YR 4/4), yellowish brown (10YR 5/4, 5/6), or light yellowish brown (10YR 6/4) and has a few grayish mottles. The boundary between the A2 and Btg horizons is abrupt to clear and wavy. Ped surfaces in the Btg horizon are very dark gray (10YR 3/1), very dark grayish brown (10YR 3/2), dark gray (10YR 4/1), dark grayish brown (10YR 4/2), gray (10YR 5/1), or grayish brown (10YR 5/2); ped interiors are 30 to 60 percent mottles of red (2.5YR 4/6, 4/8, 5/6, 5/8), yellowish red (5YR 4/6, 5/6), dark red (10R 3/6, 2.5YR 3/6), or strong brown (7.5YR 5/6, 5/8). The Btg horizon is silt loam or silty clay loam. The C horizon ranges from gray to red and from loam to silty clay loam. A clay stratum occurs in some places. The A horizon is slightly acid to strongly acid, and the Btg hori-

organic matter from crop residue and by growing grasses and legumes in rotation with other crops. Water planting of rice can help to overcome the effects of crusting. Subsoiling and chiseling help to prevent the formation of a plowpan. Response to fertilizer is good. Capability unit IIw–1.

Wildlife.—Nearly all the acreage is openland and is suitable habitat for dove, quail, rabbit, and other openland wildlife. Grain crops attract these species. The soil is also suitable habitat for ducks, geese, crawfish, snipe, and other wetland wildlife. It is not suitable for woodland wildlife.

Woodland.—Trees suitable for commercial planting are slash and loblolly pines. Potential productivity is high. The site index for loblolly pine is 90. Seedling mortality is slight. Restrictions on the use of equipment are moderate because of wetness in winter and spring.

Well managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniola, rushes, sedges, and low panicum remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

McKamie Series

roots; common fine pores lined with patchy black stains; slightly acid; abrupt, wavy boundary.

IIC2—36 to 70 inches, dark-red (2.5YR 3/6) clay; massive breaking to angular fragments; firm; few fine roots; few fine pores; few slickensides; neutral.

The A horizon ranges from dark grayish brown (10YR 4/2) to brown (10YR 4/3, 5/3). It ranges from silt loam or very fine sandy loam to clay. There is a brownish A3 or B1 horizon in some places. The Bt horizon is red (2.5YR 4/6), yellowish red (5YR 5/6), or dark red (2.5YR 3/6). It is clay or silty clay. The C horizon in places is stratified silt, sand, or clay and is generally reddish or yellowish in color. The A horizon is very strongly acid to strongly acid. The B and C horizons are neutral to very strongly acid in the upper part but range to moderately alkaline below a depth of 30 inches.

McKamie soils, 8 to 30 percent slopes (McE).—These soils are well drained and have a red clayey subsoil. They are along the lower valley walls in the northeastern part of the parish. These soils have the profile described as representative for the series. Clayey surface layers are common in eroded areas. Generally, the content of nitrogen, phosphorus, and potassium is low. The surface layer is very strongly acid, and the subsoil is strongly acid grading to neutral below. Permeability is very slow, and runoff is rapid. Available water capacity is moderate.

Included in mapping are small areas of Dossman, Muskogee, and Kenney soils.

About 95 percent of the acreage is wooded. Small areas are used for pasture, nature trails, and parks. Pasture plants lack sufficient moisture in places during dry periods in summer and fall. The principal limitations for crops are steep slopes, the erosion hazard, and low fertility.

Crops and pasture.—These soils are generally not suited to cultivated crops because of the erosion hazard and the steep, irregular slopes. Pasture is fairly well suited on the upper, smoother slopes but is very difficult to manage on the steeper slopes. Suited pasture plants are common bermudagrass, Pensacola bahiagrass, ryegrass, and vetch. Response to fertilizer is fair. Capability unit VIe-3.

Wildlife.—These soils are not suitable habitat for openland wildlife, but are suitable habitat for deer, squirrel, rabbit, and other woodland wildlife. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. The soils are not suitable habitat for wetland wildlife.

Woodland.—The principal trees are slash, longleaf, and loblolly pines and hickory, oak, and beech. Trees suitable for commercial planting are slash pine and loblolly pine. Potential productivity is moderately high. The site index for loblolly pine is 83. Seedling mortality is slight. Restrictions on the use of equipment are moderate to severe because of the steep, irregular slopes.

Well managed wooded areas can support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, purpletop, indiangrass, slender bluestem, uniola, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas and low panicums remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,600 pounds air-dry weight.

Messer Series

The Messer series consists of moderately well drained, slowly permeable soils. These soils occur as small mounds.

In a representative profile, the surface layer is grayish-brown silt loam 5 inches thick over a thin, pale-brown subsurface layer. The subsoil is light yellowish-brown silt loam to a depth of 31 inches and is yellowish-brown silty clay loam below.

The Messer soils in Evangeline Parish are mapped only with Caddo soils. They are better drained than Caddo soils.

Representative profile of Messer silt loam, in an area of Caddo-Messer complex, about 10 miles west of Pine Prairie, 150 feet northwest of road on a mound in NE¼SE¼ sec. 5, T. 3 S., R. 2 W.:

A1—0 to 5 inches, grayish-brown (10YR 5/2) silt loam; common, fine, faint, light brownish-gray mottles; weak, fine, granular structure; very friable; many fine roots; few fine pores; common, fine, soft, brown concretions; strongly acid; gradual, wavy boundary.

A2—5 to 8 inches, pale-brown (10YR 6/3) silt loam; common, fine, faint, brown mottles; weak, fine, subangular blocky structure; very friable; common fine roots; many fine pores; common, fine, soft, brown concretions; very strongly acid; clear, irregular boundary.

B1—8 to 31 inches, light yellowish-brown (10YR 6/4) silt loam; common, medium, faint, pale-brown (10YR 6/3), vertical streaks; weak, coarse, subangular blocky structure; firm; few fine roots; many fine pores lined with white silt; many, medium, soft, brown concretions; very strongly acid; clear, irregular boundary.

B21t&A'2—31 to 35 inches, yellowish-brown (10YR 5/4) silty clay loam; common, medium, prominent, yellowish-red (5YR 4/6) mottles; moderate, medium, subangular blocky structure; firm; few fine roots between peds; common fine pores; patchy thick clay films on horizontal ped surfaces; many, coarse, distinct, pale-brown (10YR 6/3) silt pockets and ped coats; common, medium, soft, yellowish-red concretions; very strongly acid; clear, wavy boundary.

B22t—35 to 63 inches, yellowish-brown (10YR 5/4) silty clay loam; common, medium, prominent, red (2.5Y 4/6) mottles in the upper part and many, coarse, distinct, yellowish-brown (10YR 5/6) mottles in the lower part; moderate, medium, subangular blocky structure; firm; common fine pores; continuous thick clay films on the gray (10YR 6/1) ped surfaces; few, medium, soft, yellowish-red concretions; strongly acid; gradual, wavy boundary.

B3—63 to 90 inches, pale-olive (5Y 6/3) silty clay loam; common, medium, prominent, yellowish-brown (10YR 5/8) mottles; weak, medium, subangular blocky structure; firm; continuous thick clay films on horizontal ped surfaces; thin silt coats on vertical ped faces; few, medium, soft, brown concretions; medium acid.

The A1 horizon is 3 to 12 inches thick and is dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), or brown (10YR 4/3, 5/3). The A2 horizon is pale brown (10YR 6/3), very pale brown (10YR 7/3), or light yellowish brown (10YR 6/4). The B1 horizon is brown (10YR 5/3), yellowish brown (10YR 5/4, 5/6), pale brown (10YR 6/3), or light yellowish brown (10YR 6/4). The Bt horizon is tongued and is brown (10YR 4/3, 5/3) mottled with yellowish brown, strong brown, yellowish red, red, gray, and grayish brown. It ranges from silt loam to silty clay loam. The A horizon is strongly acid. The B horizon is very strongly acid but grades to medium acid with increasing depth.

Midland Series

The Midland series consists of poorly drained soils that have a clayey subsoil. These soils are in broad, slightly concave areas at lower elevations in the southern part of the parish.

In a representative profile, the surface layer is dark-gray silty clay loam 5 inches thick. The subsoil is gray to dark-gray clay mottled with brown and yellowish brown.

Midland soils are associated with Vidrine, Crowley, and Mowata soils. They have a finer textured surface layer than each of these soils and are more poorly drained than Crowley and Vidrine soils.

Representative profile of Midland silty clay loam, about 3 miles north of Basile, in the western edge of sec. 16, T. 6 S., R. 2 W.:

Ap—0 to 5 inches, dark-gray (10YR 4/1) silty clay loam; moderate, medium, subangular blocky structure; firm; many fine roots; few, fine, hard, dark-brown concretions; medium acid; abrupt, smooth boundary.

B21tg—5 to 17 inches, gray (10YR 5/1) clay; many, fine, distinct, brown (10YR 5/3) mottles and few, medium, distinct, yellowish-brown (10YR 5/8) mottles; moderate, coarse, prismatic structure parting to moderate, medium, subangular blocky; very firm; few fine roots; few fine pores; patchy thin clay films on ped surfaces; thin silt coats on vertical ped surfaces; common, fine, shiny ped surfaces; few, fine, soft, black and brown concretions; very strongly acid; gradual wavy boundary.

crops are rice and soybeans. Rice is well suited and is the principal crop. Suited pasture plants are common bermudagrass, Pensacola bahiagrass, ryegrass, and white clover.

The soil is well suited to flood irrigation. It is difficult to keep in good tilth. Fall plowing helps in preparing a good seedbed in the spring. Rice is generally water planted. Land smoothing and water leveling increase the efficiency of flood irrigation and improve drainage. Where row crops are grown, proper row direction is needed to improve drainage. Response to fertilizer is good. Lime is needed, especially in pasture rotation. Capability unit IIIw–5.

Wildlife.—Open areas are extensive, but the soil is poorly suited as habitat for quail, dove, rabbits, and other openland wildlife. It is not suitable habitat for woodland wildlife. It is well suited as habitat for ducks, geese, snipe, crawfish, and other wetland wildlife.

Woodland.—Trees suitable for commercial planting are oak, sweetgum, and loblolly and slash pines. Potential productivity is high. The site index for sweetgum is about 86. Seedling mortality is slight. Restrictions on the use of equipment are severe because of wetness.

Well-managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, chalky bluestem, plumegrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or

ture; firm; shiny ped surfaces; mildly alkaline; Seedling mortality is moderate. Restrictions on the use

Mowata silt loam (Mt).—This soil is in broad, slightly concave areas in the southern part of the parish. It becomes waterlogged after a rain and is wet for extended periods because runoff is slow and permeability is very slow in the claypan subsoil. This soil has the profile described as representative for the series. Generally, the content of nitrogen and phosphorus is very low, and the potassium content is low. The soil is medium acid in the surface layer and strongly acid below. Available water capacity is moderate.

Included in mapping are small areas of Crowley and Vidrine soils.

Most of the acreage is used for crops and pasture. The soil is saturated in winter and early in spring, and water accumulates on the surface after a rain. Soil moisture, however, is inadequate during dry periods in most years. The principal limitations are wetness and low fertility.

Crops and pasture.—The soil is fairly well suited to most crops and pasture plants grown locally. Suited crops are rice, soybeans, cotton, and sweetpotatoes. Rice is well suited and is the principal crop. Suited pasture plants are common bermudagrass, Pensacola bahiagrass, ryegrass, white clover, and vetch.

The soil is well suited to flood irrigation. It is fairly easy to keep in good tilth, but if it is under continuous cultivation, a plowpan is likely to form.

Land smoothing and water leveling increase the efficiency of flood irrigation and improve drainage. Where row crops are grown, proper row direction is needed to improve drainage. Subsoiling and chiseling help to prevent the formation of a plowpan. Response to fertilizer is good. Lime is needed, especially in pasture

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Muskogee soils are associated with Acadia, McKamie, and Loring soils. They are more poorly drained than McKamie soils and are better drained than Acadia soils. They are more clayey and less brittle in the subsoil than Loring soils.

The Muskogee soils in Evangeline Parish are mapped only with McKamie soils.

Representative profile of Muskogee silt loam in an area of Muskogee-McKamie complex, 3 to 8 percent slopes, eroded, about 2 miles west of Easton, 900 feet north of road in the NE¼NW¼ sec. 35, T. 3 S., R. 1 W.:

Ap—0 to 6 inches, grayish-brown (10YR 5/2) silt loam; few, fine, faint, brown mottles; weak, fine, granular structure; friable; many fine roots; few, fine, hard, black concretions; very strongly acid; abrupt, smooth boundary.

B21t—6 to 22 inches, yellowish-brown (10YR 5/4) silty clay loam; common, medium, prominent, red (2.5YR 4/6) mottles; moderate, medium, subangular blocky structure; firm; few fine roots; few fine pores lined with clay; continuous thin clay films on ped surfaces; few, fine, soft, brown concretions; very strongly acid; gradual, wavy boundary.

B22tg—22 to 58 inches, mottled gray (10YR 6/1) and yellowish-brown (10YR 5/8) silty clay; few, fine, prominent, red (2.5YR 4/6) mottles; moderate, fine, angular blocky structure; firm; many fine shiny ped surfaces; few, fine, hard, brown concretions; very strongly acid; gradual, wavy boundary.

B23tg—58 to 80 inches, mottled gray (10YR 6/1) and yellowish-red (5YR 4/6) clay; common, medium, distinct, yellowish-brown mottles; moderate, medium, angular blocky structure; very firm; many, medium, soft, brown concretions; medium acid.

The A horizon is grayish brown (10YR 5/2) or brown (10YR 5/3, 4/3). The B21t horizon is yellowish-brown (10YR 5/4, 5/6, 5/8) silt loam or silty clay loam that contains red

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crops are sweetpotatoes, soybeans, cotton, and truck crops. The principal crop is sweetpotatoes. Suited pasture plants are vetch, ryegrass, bermudagrass, dallisgrass, Pensacola bahiagrass, and white clover. The soils are fairly easy to keep in good tilth, but if plowed when wet, the clay in eroded spots becomes cloddy. If the soils are under intensive cultivation, a plowpan can form.

Where the soil is cultivated, terracing or contour cultivation, stripcropping, rotation with close-growing vegetation, and cover crops are needed to reduce runoff and erosion. Subsoiling and chiseling help to prevent the formation of a plowpan.

Response to fertilizer is good. Lime is needed. Capability unit IVe-1.

Wildife.—There are only a few small open areas. The Muskogee soil is well suited as habitat for dove, quail, rabbit, and other openland wildlife. The McKamie soil is not suited. Grainfields and pasture areas attract these species. The Muskogee soil is well suited and the McKamie soil is suited as habitat for deer, rabbit, squirrel, and other woodland wildlife. Small open areas planted to winter pasture plants provide a good supply of food for deer and rabbit. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. Neither soil is suitable habitat for wetland wildlife.

Woodland.—The principal trees are loblolly pine, oak, and sweetgum. Trees suitable for planting are slash and loblolly pines. Potential productivity is moderately high. The site index for loblolly pine is 82. Seedling mortality

common, medium, hard, black concretions; slightly acid; abrupt, smooth boundary.

B2t—5 to 12 inches, dark yellowish-brown (10YR 4/4) silty clay loam; few, fine, distinct, yellowish-brown mottles; moderate, medium and fine, subangular blocky structure; friable; common fine roots; many fine pores lined with clay; patchy thin clay films and black stains on ped surfaces; few, fine, soft, red and brown concretions; strongly acid; gradual, wavy boundary.

Btx&A'2—12 to 45 inches, dark yellowish-brown (10YR 3/4) silt loam; light brownish-gray (10YR 6/2) and yellowish-brown (10YR 5/4) silty ped surfaces and mottles; moderate, coarse, prismatic structure parting to moderate, coarse, subangular; firm, slightly brittle; many medium tubular pores inside peds lined with clay films and black stains; patchy thin clay films on horizontal ped surfaces; many, medium, soft, black concretions; medium acid; gradual, wavy boundary.

B3tg—45 to 65 inches, light olive-gray (2.5Y 6/2) silt loam; weak, medium, subangular blocky structure; friable; few fine pores; patchy thin clay films on ped surfaces; common, medium, soft, brown concretions; medium acid.

The A horizon is grayish brown (10YR 5/2), dark grayish brown (10YR 4/2), or brown (10YR 4/3, 5/3) and is 4 to 8 inches thick. The B2t horizon is dark yellowish brown (10YR 4/4), yellowish brown (10YR 5/3, 5/4, 5/6), or brown (7.5YR 4/4, 5/4). It ranges from silt loam to silty clay loam. Grayish mottles occur in the lower part of the B2t or in the fragipan. The Btx and A'2 horizons are dark yellowish brown (10YR 3/4), yellowish brown (10YR 5/4, 5/6), or brown (10YR 4/3, 5/3) and have grayish-brown or light brownish-gray silty ped faces. They are silt loam or silty clay loam. The A horizon is slightly acid to medium acid, and the B horizon is medium acid to strongly acid.

soil is suitable habitat for squirrel, deer, rabbit, and other woodland wildlife. Forestry practices that favor mast-producing trees increase the squirrel population and furnish supplemental food for deer. The soil is also suitable habitat for ducks, geese, snipe, crawfish, and other wetland wildlife.

Woodland.—Trees suitable for commercial planting are slash and loblolly pines. Potential productivity is very high. The site index for loblolly pine is 99. Seedling mortality is slight, and restrictions on the use of equipment are moderate because of slight wetness.

Well-managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniola, sedges, rushes, low panicum, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas, rushes, sedges, and low panicums remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,800 pounds air-dry weight.

Patoutville Series

The Patoutville series consists of somewhat poorly drained, nearly level to gently sloping soils that are slowly permeable. These soils are in broad areas at the higher elevations in the eastern and southeastern parts of the parish.

In a representative profile, the surface layer is grayish-brown silt loam 7 inches thick. The subsoil is dark

weak, medium, subangular blocky structure; friable; few fine pores lined with clay; patchy thin films on ped surfaces; few, medium, soft, brown concretions; neutral.

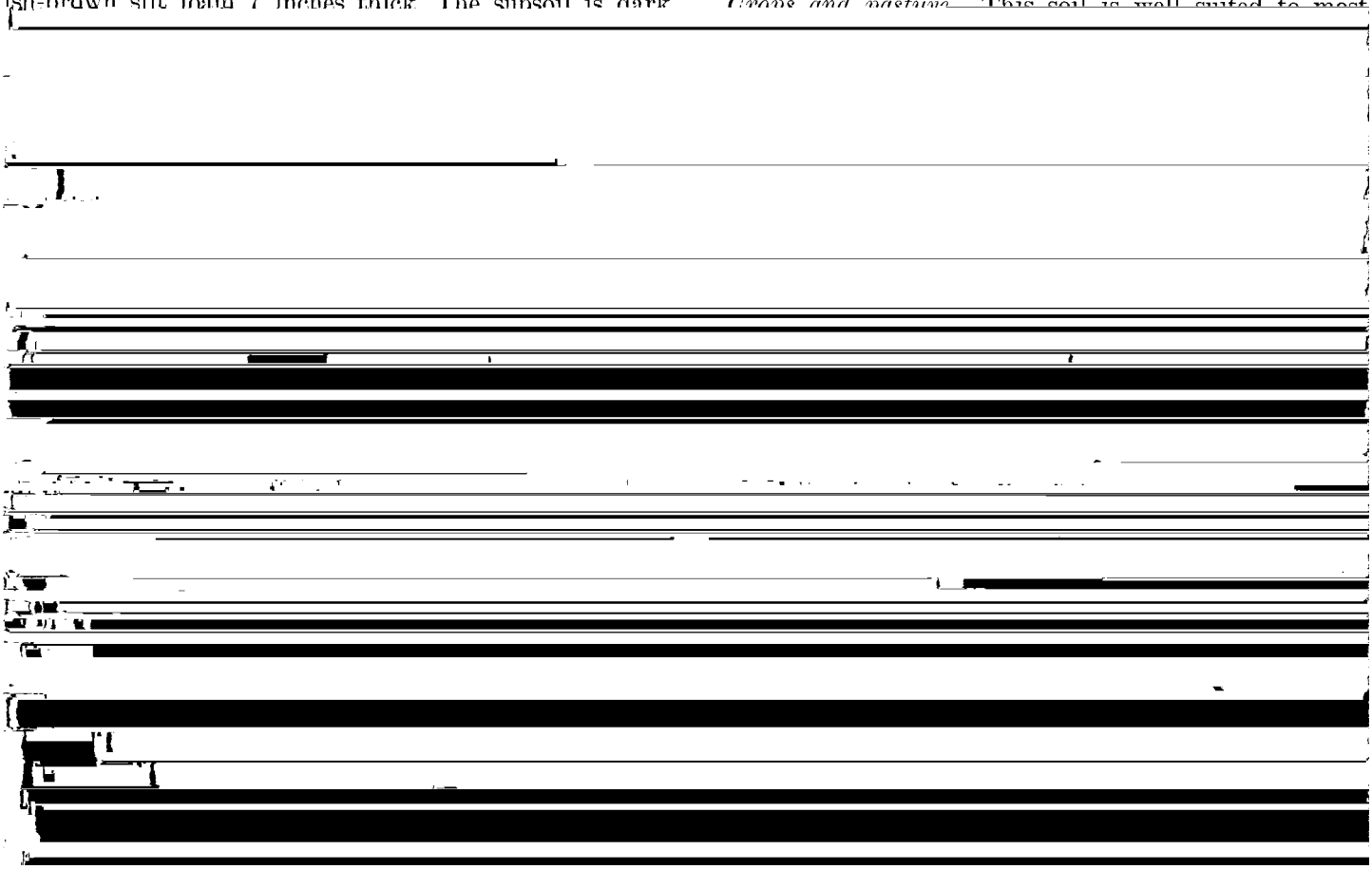
The A horizon is dark grayish brown (10YR 4/2) or grayish brown (10YR 5/2) and ranges from 4 to 9 inches in thickness. The upper part of the Bt horizon is dark grayish brown (10YR 4/2), gray (10YR 5/1), or brown (10YR 4/3, 5/3) mottled with red, yellowish brown, and gray. It ranges from silt loam to silty clay loam. The lower part of the Bt horizon is gray (10YR 5/1, 6/1) and has many yellowish-brown mottles. It is silt loam or silty clay loam. The A horizon is medium acid, and the B horizon is strongly acid to neutral.

Patoutville silt loam, 1 to 3 percent slopes, eroded (PaB2).—This soil is in narrow areas along streams in the eastern part of the parish. It is wet for extended periods because permeability is slow in the subsoil. The surface layer is grayish-brown silt loam, and the subsoil is dark grayish-brown light silty clay loam mottled with red and yellowish brown. Generally, the content of nitrogen is very low, and the content of phosphorus and potassium is low. The surface layer is medium acid, and the layers beneath are strongly acid to medium acid. Runoff is medium. Available water capacity is high.

Included in mapping are small areas of Olivier and Crowley soils.

Almost all the acreage is used for crops and pasture. The soil is wet in winter and spring, but lacks adequate moisture during dry periods in some years. The principal limitations are low fertility, wetness, and the erosion hazard.

Crops and pasture.—This soil is well suited to most



Patoutville-Crowley complex (Pc).—These somewhat poorly drained to poorly drained, nearly level soils are in broad, slightly convex areas in the southeastern part of the parish. The Patoutville soil makes up about 60 percent of this complex, and the Crowley soil 30 percent.

The Patoutville soil is on broad, low ridges and mounds. It has the profile described as representative for the series. This soil is wet for extended periods because permeability is slow in the subsoil. Generally, the content of nitrogen is very low, and the

Properly managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, switchgrass, indiangrass, uniolas, sedges, rushes, low panicgrass, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases the less shade-tolerant plants disappear, and the sedges, rushes, uniolas, and low panicums remain. Potential forage production per acre on woodland in excellent condition under a

Included in mapping are small areas of Moreland, Latanier, and Gallion soils; small areas of peats and mucks; and areas of gray, acid clays.

Most of the acreage is woodland. A small acreage is used for pasture. Even though shallow flooding generally occurs throughout the year the supply of moisture available to plants is inadequate during dry periods. The principal limitations are frequent flooding, wetness, and poor tilth.

Crops and pasture.—Flooding on this soil is usually too severe for the production of crops. Small areas have been cleared for pasture. Common bermudagrass is a suitable pasture plant that tolerates flooding fairly well.

firm; few fine pores lined with clay; patchy thin clay films on ped surfaces; red (2.5YR 4/8) ped interiors; sand grains coated and bridged with dark-red (2.5Y 3/6) clay films; very strongly acid.

Bt&A'2—56 to 83 inches, yellowish-red (5YR 4/8) sandy clay loam; moderate, coarse, subangular blocky structure; friable; few fine pores; patchy thin clay films on horizontal ped faces; thick light yellowish-brown (10YR 6/4) very fine sand coats on vertical ped surfaces; very strongly acid; gradual, wavy boundary.

B't—83 to 96 inches, light-gray (10YR 7/1) sandy clay; common, coarse, prominent, red (2.5YR 4/8) mottles; moderate, coarse, prismatic structure; firm; very strongly acid.

The A1 horizon is dark grayish brown (10YR 4/2), grayish

The site index for loblolly pine is 90. Seedling mortality and restrictions on the use of equipment are slight.

Well-managed wooded areas support a good cover of understory vegetation that cattle can graze. The major understory plants are pinehill bluestem, purpletop, slender bluestem, cutover muhly, uniola, low panicums, and carpetgrass. Under an open canopy, all or most of these plants can grow. As the canopy increases, the less shade-tolerant plants disappear, leaving the uniolas and low panicums. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,200 pounds air-dry weight.

Ruston fine sandy loam, 5 to 8 percent slopes (RuD).—This is a well-drained soil that has a reddish subsoil. It occurs along drainageways in the northwestern part of the parish. This soil has the profile described as representative for the series. Generally, the content of nitrogen, phosphorus, potassium, and calcium is very low. The surface layer is strongly acid, and the subsoil is very strongly acid. Permeability is moderate, and runoff is medium to rapid. Available water capacity is moderate.

Included in mapping are small areas of Kenney and Glenmora soils.

About 90 percent of the acreage is wooded. A small acreage is used for crops and pasture. The supply of soil moisture available to plants is inadequate during dry periods late in summer and in fall of most years. The principal limitations are the erosion hazard and low fertility.

Crops and pasture.—The soil is moderately well suited to most crops and pasture plants grown locally. Suited crops are cotton, soybeans, small grains, and truck crops. Suited pasture plants are common bermudagrass, Coastal bermudagrass, Pensacola bahiagrass, ryegrass, dallisgrass, millet, white clover, crimson clover, and vetch. It plants can grow. As the canopy increases, the less shade-tolerant plants disappear, and the uniolas and low panicums remain. Potential forage production per acre on woodland in excellent condition under a medium canopy is about 1,200 pounds air-dry weight.

Savannah Series

The Savannah series consists of moderately well drained, nearly level soils that have a fragipan. These soils are in long, narrow areas along small drainageways in the northwestern part of the parish.

In a representative profile, the surface layer is dark grayish-brown very fine sandy loam 7 inches thick. The subsoil is yellowish-brown sandy clay loam. The fragipan is at a depth of 34 inches. It is mottled gray, red, and brown.

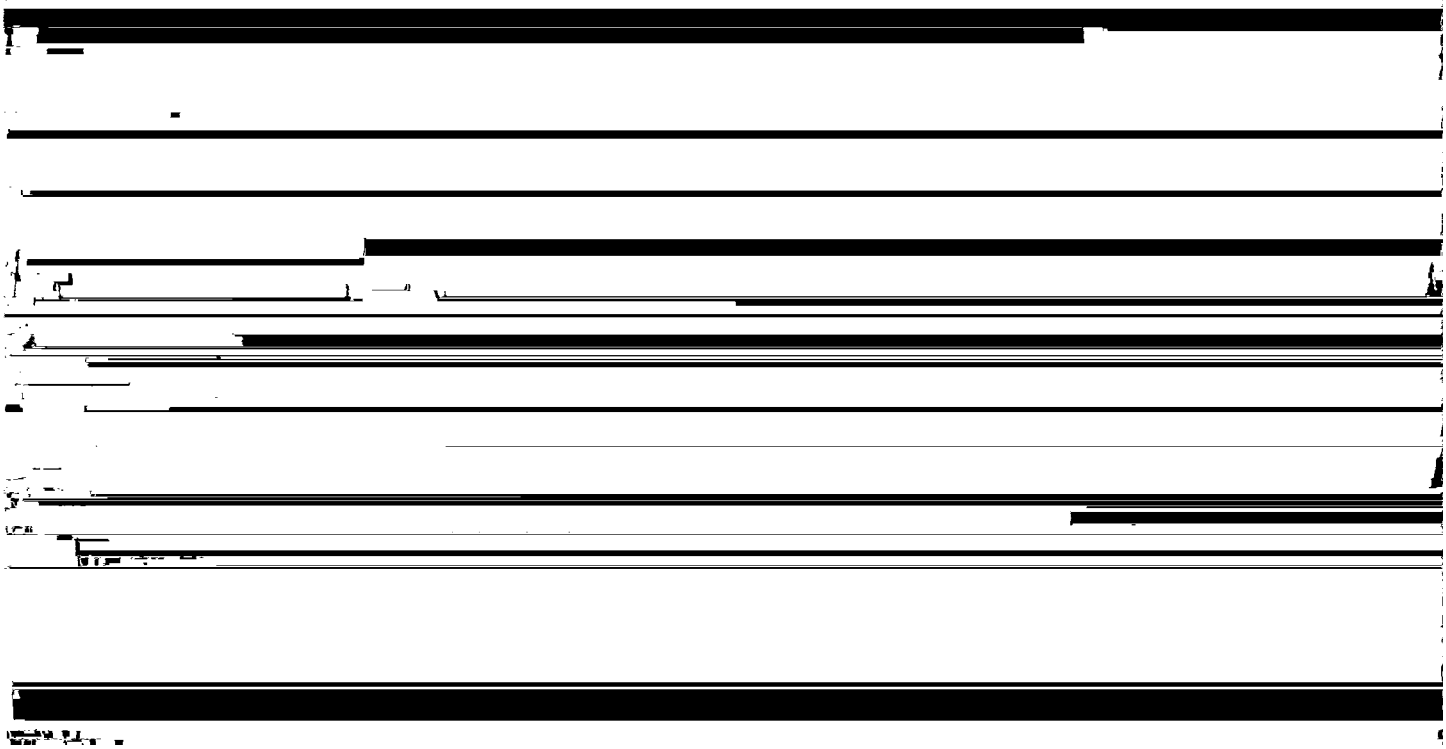
Savannah soils are associated with Ruston and Glenmora soils. They differ from Ruston soils in having a fragipan and in being more poorly drained. They are better drained than Glenmora soils.

Representative profile of Savannah very fine sandy loam, 1 to 3 percent slopes, about 9 miles northwest of Pine Prairie in NW¼SW¼ sec. 26, T. 2 S., R. 2 W.:

A1—0 to 7 inches, dark grayish-brown (10YR 4/2) very fine sandy loam; common, medium, distinct, yellowish-brown (10YR 5/4) mottles; weak, fine, granular structure; friable; common fine roots; few fine pores; few, fine, hard, black and brown concretions; strongly acid; gradual, wavy boundary.

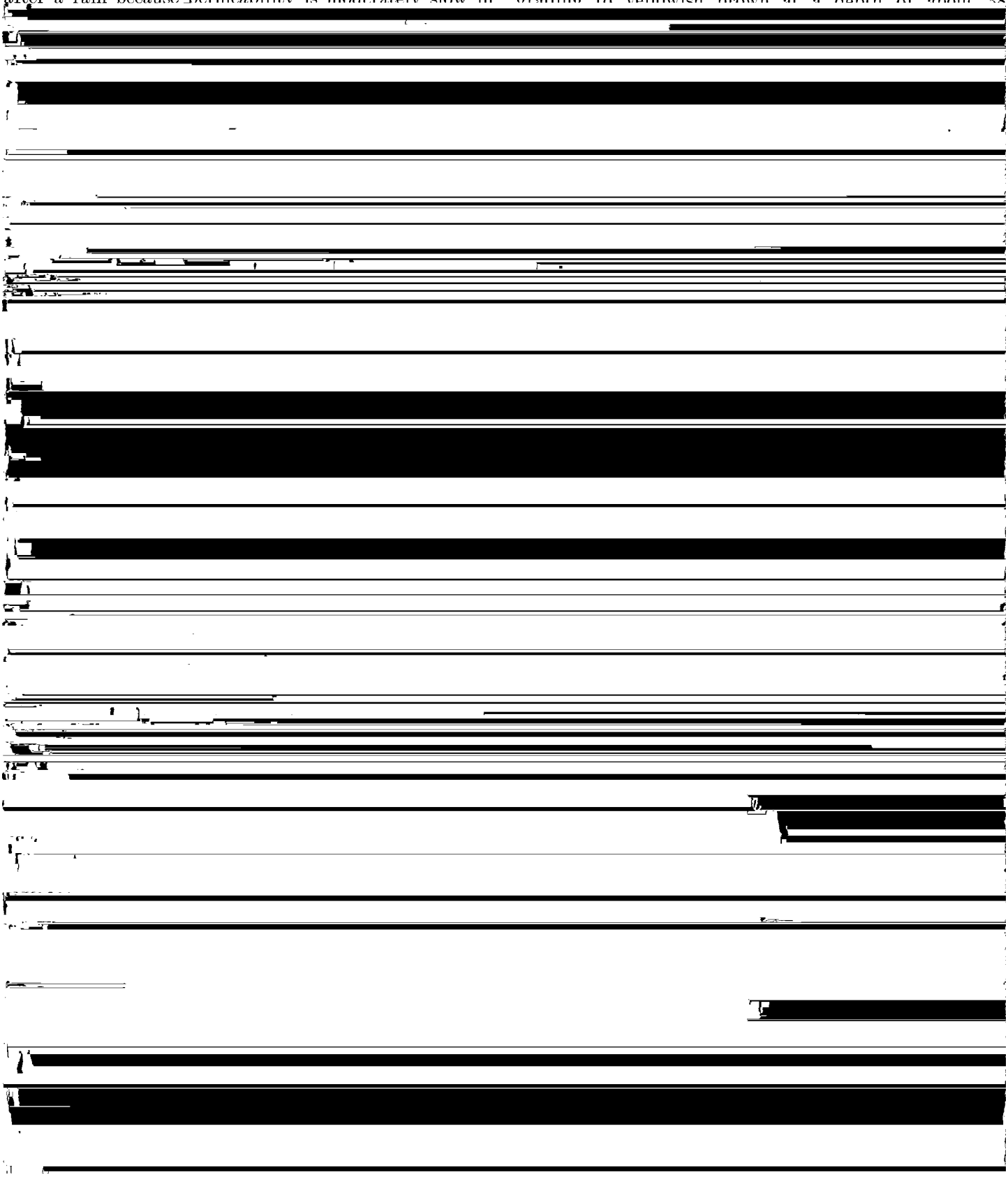
B21t—7 to 20 inches, yellowish-brown (10YR 5/8) sandy clay loam; common, prominent, yellowish-red (5YR 5/8) mottles; weak, medium, subangular blocky structure; friable; few fine roots; few fine pores; patchy thin clay films on ped surfaces; common, fine, hard, brown concretions; very strongly acid; gradual, wavy boundary.

B22t—20 to 34 inches, mottled pale-brown (10YR 6/3) and [illegible] sandy clay loam; moderate



western part of the parish. It is wet for a short period after a rain because permeability is moderately slow in

subsoil is dark grayish-brown and red silty clay loam grading to yellowish brown at a depth of about 38



Tenot silt loam, 1 to 3 percent slopes (TeB).—This potassium, and calcium is low. The soil is medium acid

Vidrine Series

The Vidrine series consists of somewhat poorly drained soils that have a loamy surface layer and a clayey subsoil. Typically, these soils occupy small mounds.

In a representative profile, the surface layer is dark grayish-brown silt loam 3 inches thick, and the subsurface layer is very pale brown silt loam 3 inches thick. The subsoil to a depth of 27 inches is mainly yellowish-brown silt loam. Below this, it is mottled grayish-brown and yellowish-brown silty clay.

The Vidrine soils in Evangeline Parish are mapped only with Crowley and Wrightsville soils. They are better drained and are yellower in the upper part of the subsoil than those soils.

Representative profile of Vidrine silt loam in an area of Wrightsville-Vidrine complex, about 8 miles west of Mamou on the east side of SE¼NE¼ sec. 15, T. 5 S., R. 2 W.:

A1—0 to 3 inches, dark grayish-brown (10YR 4/2) silt loam; few, fine, dark-brown mottles; weak, fine, granular structure; friable; many fine roots; few fine pores; few, fine, soft, black concretions; strongly acid; clear, wavy boundary.

A2—3 to 6 inches, very pale brown (10YR 7/3) silt loam; common, fine, distinct, strong-brown mottles; weak, fine, granular structure; friable; many fine roots; few fine pores; common, medium, soft, brown concretions; strongly acid; clear, irregular boundary.

B1—6 to 24 inches, yellowish-brown (10YR 5/4) silt loam; common, medium, pale-brown (10YR 6/3), vertical streaks in upper part of horizon; weak, coarse, subangular blocky structure; firm; common fine roots; few fine pores; common, fine, hard, brown concretions; very strongly acid; abrupt, wavy boundary.

Bt&A'2—24 to 27 inches, brownish-yellow (10YR 6/6) silty clay loam; pale-brown (10YR 6/3) silt ped coats and ped interiors; common, fine, prominent, red mottles; moderate, medium, subangular blocky structure; firm; many, medium, hard, brown concretions; very strongly acid; clear, wavy boundary.

B21tg—27 to 46 inches, mottled grayish-brown (10YR 5/2) and yellowish-brown (10YR 5/4) silty clay; many, medium, prominent, red (2.5YR 4/6) mottles; weak, coarse, prismatic structure parting to moderate, medium, subangular and fine angular blocky; very firm; few fine pores; grayish-brown (10YR 5/2) thin silt coats on vertical ped surfaces in upper part; continuous thick clay films on ped surfaces; strongly acid; gradual, wavy boundary.

B22t—46 to 54 inches, pale-brown (10YR 6/3) silty clay loam; common, medium, yellowish-brown (10YR 5/6) mottles; moderate, medium, subangular blocky structure; firm; patchy thin clay films on ped surfaces; thin silt coats on vertical ped surfaces; slightly acid; gradual, wavy boundary.

B3—54 to 72 inches, light-gray (10YR 6/1) silt loam; horizon are red and yellowish brown. The A horizon is strongly acid, and the B horizon is very strongly acid to neutral.

Wrightsville Series

The Wrightsville series consists of level to nearly level, poorly drained, very slowly permeable soils. These soils are in broad, wooded areas and drainageways in the southern half of the parish.

In a representative profile, the surface layer is gray silt loam 3 inches thick. The subsurface layer is light-gray silt loam 15 inches thick. The upper part of the subsoil is light olive-gray silty clay. The lower part is gray silty clay loam.

Wrightsville soils are associated with Acadia, Crowley, Mowata, and Vidrine soils. They are more poorly drained and grayer than Acadia and Vidrine soils. Compared with Crowley and Mowata soils, they do not have dark-colored ped surfaces. Also, they do not have red mottles, which are typical of Crowley soils.

Representative profile of Wrightsville silt loam in an area of Wrightsville-Vidrine complex, about 4 miles southwest of Ville Platte, 1,000 feet south of the road, and 200 feet west of Bayou des Cannes in sec. 45, T. 4 S., R. 1 E.:

Ap1—0 to 3 inches, gray (10YR 5/1) silt loam; weak, fine, granular structure; friable; many fine roots; few, fine, soft, brown concretions; strongly acid; abrupt, wavy boundary.

Ap2—3 to 8 inches, light-gray (10YR 6/1) silt loam; weak, medium, platy structure; firm; common fine roots; common fine pores; few, fine, soft, dark-brown concretions; few, patchy, very dark grayish-brown (10YR 3/2) stains on ped surfaces; strongly acid; gradual, wavy boundary.

A2g—8 to 18 inches, light-gray (10YR 7/2) silt loam; few, medium, distinct, dark yellowish-brown (10YR 4/4) mottles; weak, medium, subangular blocky structure; friable; many fine pores; few fine roots; common, fine, soft, black concretions; very strongly acid; abrupt, irregular boundary; tongues extend to a depth of 29 inches.

B21tg—18 to 29 inches, light olive-gray (5Y 6/2) silty clay; common, medium, prominent, yellowish-brown (10YR 5/8) mottles; weak, fine, angular blocky structure; firm; patchy thin clay films on ped surfaces; few fine roots; common fine pores; common, medium, soft, black and brown concretions; very strongly acid; gradual, wavy boundary.

B22tg—29 to 39 inches, light olive-gray (5Y 6/2) silty clay; common, medium, prominent, yellowish-brown (10YR 5/8) mottles; compound, medium and coarse, prismatic structure breaking to moderate, medium, subangular blocky; firm; few fine roots between peds; patchy thin clay films on horizontal ped surfaces and in pores; thin silt coats on ped surfaces;

uous thin clay films on ped surfaces; few thin silt coats on vertical ped surfaces; few, medium, hard carbonate concretions at a depth of 50 inches; few, medium, hard, black concretions; moderately alkaline.

The Ap horizon is dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), or gray (10YR 5/1, 6/1). The A2g horizon is light gray (10YR 6/1, 7/1, 7/2) mottled with yellowish brown. Tongues of the A2g horizon extend well into the Btg horizon. The Btg horizon is gray (10YR 6/1, 5/1; 5Y 6/1), and light olive gray (5Y 6/2) mottled with yellowish brown

overcome the effects of crusting. Subsoiling and chiseling help to prevent the formation of a plowpan. Response to fertilizer is good. Lime is needed, especially in pasture rotation. Capability unit IIIw–3.

Wildlife.—There are only a few small open areas. These soils are poorly suited as habitat for quail, dove, rabbit, and other openland wildlife. The soils are suitable habitat for deer, squirrel, rabbit, and other woodland wildlife. Small open areas planted to winter pasture

is an important source of nitrogen; it also increases the rate of water intake, reduces surface crusting, and improves tilth. The supply of organic matter can be maintained by growing crops that produce an extensive root system and an abundance of foliage, by leaving plant residue on the soil, by growing perennial grasses and legumes in rotation with other crops, and by adding manure.

Tillage.—Excess tillage should be avoided. The soil

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by *w*, *s*, and *c*, because the soils in class V are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife, or recreation.

CAPABILITY UNITS are soil groups within the subclasses. The soils in one capability unit are enough alike

Unit IIIe–2. Moderately well drained, acid soils that formed in loess.

Unit IIIe–3. Well-drained, acid, loamy soils that have a reddish subsoil.

Subclass IIIw. Soils have severe limitations because of excess water.

Unit IIIw–1. Poorly drained and moderately well drained, acid soils that have a loamy subsoil.

Unit IIIw–2. Poorly drained and moderately well drained, undulating, acid soils that have a loamy subsoil.

Unit IIIw–3. Poorly drained and somewhat poorly drained, acid soils that have a loamy subsoil.

Unit IIIw–4. Poorly drained and somewhat poorly drained, acid, loamy soils that are clayey in the subsoil.

Unit IIIw–5. Poorly drained soils that have a silty clay loam surface layer and clayey subsoil.

Unit IIIw–6. Somewhat poorly drained, clayey soils that are calcareous in the subsoil.

Unit IIIw–7. Poorly drained, acid, loamy soils that have a clayey subsoil.

Class IV soils have very severe limitations that restrict the choice of plants, require very careful management, or both.

Subclass IVe. Soils are subject to severe erosion if they are cultivated and not protected.

Unit IVe–1. Moderately well drained and well drained, acid soils that have moderate slopes.

Subclass IVw. Soils have severe limitations for cultivation because of excess water.

Unit IVw–1. Poorly drained, acid, loamy soils that are subject to occasional damaging floods.

Class V soils are not likely to erode, but have other limitations, impractical to remove without major reclamation, that limit their use largely to pasture, woodland, or wildlife.

Subclass Vw. Soils have a very severe limitation because of frequent flooding.

Unit Vw–1. Poorly drained, frequently flooded, acid, loamy soils on stream bottom lands.

Unit Vw–2. Well-drained, frequently flooded, acid, loamy soils on stream bottom lands.

Unit Vw–3. Poorly drained and well-drained

Estimated yields

Table 2 shows estimated yields, under a high level of management, for the principal crops grown in Evangeline Parish. These are yields averaged over a 10-year period. The estimates are based chiefly on observations made by members of the soil survey party and on information supplied by farmers, district conservationists, and other agricultural workers. All yield estimates, except for rice, are based on average rainfall and adequate drainage. Irrigation is not considered.

High-level management includes (1) good seedbed preparation, (2) use of suitable high-yielding crop varieties, (3) fertilization in accordance with needs determined through soil tests, (4) control of insects, weeds, and plant diseases, (5) drainage for naturally wet soil, (6) measures for control of erosion, and (7) timely fieldwork.

Woodland and Woodland Grazing [2]

Commercial forests cover 48 percent of Evangeline Parish. The total acreage of woodland in the parish is 205,590 acres, and it is all privately owned. Pine makes up the major part of the marketable timber by volume.

The suitability of each soil for wood crops is evaluated in the section "Descriptions of the Soils." Factors that affect woodland management in Evangeline Parish are defined in the following paragraphs.

Productivity is expressed in terms of site index, which is the height in feet to which a tree will grow in a specified number of years. The site index is 30 feet for cottonwood and 50 feet for other trees.

Equipment restriction refers to the limitation in the use of equipment for managing or harvesting the tree crop. A rating of *slight* indicates that the equipment used is seldom limited in kind or in the time of year. A rating of *moderate* indicates a need for modified equipment or seasonal restrictions because of wetness, flooding, or overflow. A rating of *severe* indicates the need for special equipment.

Seedling mortality refers to expected survival of seedlings during the first two growing seasons after planting or seeding. Normal rainfall, adequate site preparation, good planting stock, proper planting methods, and appropriate protection and cultivation are assumed. A rating of *slight* indicates that unsatisfactory survival of seedlings on less than 25 percent of the area is likely. A rating of *moderate* indicates that unsatisfactory survival

TABLE 2.—*Estimated average acre yields of principal crops and pasture plants under high level of management*

[Absence of data means the crop is not commonly grown on the soils]

Soil	Crops				Pasture	
	Rice	Cotton	Sweet-potatoes	Soybeans	Common bermuda-grass	Pensacola bahiagrass
	Bu.	*Lb. lint*	*Bu.*	*Bu.*	*A.U.M.*[1]	*A.U.M.*
Acadia silt loam, 1 to 3 percent slopes	80	400	250	20	6.0	7.5
Basile-Wrightsville complex, frequently flooded					4.0	
Caddo-Messer complex	80	400	200	18	5.0	6.0

etation on the soils in relation to vegetation that could grow there.

A grazable woodland is in *excellent* condition if 76 percent or more of the present understory is the same kind that originally grew on the soil. It is in *good* condition if the percentage is between 51 and 75 percent, in *fair* condition if the percentage is between 26 and 50, and in *poor* condition if the present percentage is less than 25.

Potential forage production depends on woodland suitability and canopy class. Current forage production depends upon the forage condition class and the moisture available to the plants during their growing season.

One of the main objectives in good woodland grazing management is to keep the woodland forage in excellent and good condition. If this is done, water is conserved, yields are improved, and the soils are protected.

Wildlife [3]

The soils and the water areas of Evangeline Parish furnish suitable habitat for many kinds of wildlife and fish. Some species are present in large number, whereas others are relatively scarce or seasonal. Wildlife species associated with woodland are found in the northern part of the parish and in wooded areas along drainageways in the southern part. Openland wildlife are most abundant in the southern prairie part of the parish. The level of the game and fish population depends on the amount and quality of available habitat.

The northern part of Evangeline Parish has a moderate population of deer, squirrel, rabbit, and quail, and the southern part has a seasonal population of dove, ducks, geese, and snipe.

Sport fishing for bass, white perch, and bluegill is fair in Chicot Lake, Cocodrie Lake, and Millers Lake. Commercial fishing for catfish is fair in Bayou Cocodrie. Fishing for crawfish is good in improved habitat in the Red River bottom land area and fair in the rice-growing area.

Definitions of suitability ratings of soils used for wildlife habitat are as follows:

Well suited means that habitat generally is easily created, improved, or maintained; that the soil has few or no limitations that affect management; and that satisfactory results can be expected.

Suited means that habitat can be created, improved, or maintained in most places; that the soil has moderate limitations that affect management; and that moderate intensity of management and fairly frequent attention may be required for satisfactory results.

Poorly suited indicates that habitat can be created, improved, or maintained in most places; that the soil has severe limitations; that habitat management is difficult and expensive and requires intensive effort; and that results are not always satisfactory.

Unsuited indicates that it is impractical or impossible to create, improve, or maintain habitat and that unsatisfactory results are probable.

For detailed information on the use of each soil for wildlife habitat, refer to the mapping unit description in the section "Descriptions of the Soils."

[3] Prepared by RAY SMITH, biologist, Soil Conservation Service.

Soils and Engineering [4]

Some soil properties are of special interest to engineers because they affect the construction and maintenance of roads, airports, pipelines, building foundations, facilities for water storage, erosion control structures, drainage systems, and sewage disposal systems. Among the properties most important to engineers are permeability, strength, consolidation characteristics, texture, plasticity, and soil reaction. Depth to unconsolidated materials, and topography are also important.

Information concerning these and related soil properties is given in tables 3, 4, and 5. The estimates and interpretations in these tables can be used to—

1. Make studies that will aid in selecting and developing industrial, commercial, residential, and recreational sites.
2. Make preliminary estimates of the engineering properties of soils in planning drainage systems, farm ponds, irrigation systems, terraces, waterways, and diversion terraces.
3. Make preliminary evaluations of soil conditions that will aid in selecting sites for highways, airports, pipelines, and cables and in planning detailed investigations at selected locations.
4. Locate probable sources of gravel, sand, and other construction material.
5. Correlate performance of soil mapping units to develop information that will be useful in planning engineering practices and in designing and maintaining engineering structures.
6. Determine the suitability of soils for cross-country movement of vehicles and construction equipment.
7. Supplement other publications, such as maps, reports, and aerial photographs, that are used in preparation of engineering reports for a specific area.
8. Develop other preliminary estimates for construction purposes pertinent to the particular area.

The engineering interpretations reported here do not eliminate the need for sampling and testing at the site of specific engineering work which involves heavy loads or excavations that are deeper than the depths reported (ordinarily about 5 feet). Even in these situations, however, the soil map is useful in planning more detailed field investigations and in indicating the kinds of problems that may be expected.

Some of the terms used by soil scientists have special meanings in soil science that may not be familiar to engineers. These terms are defined in the Glossary.

Engineering classification systems

The two systems most commonly used in classifying soils for engineering are the systems approved by the American Association of State Highway Officials (AASHO) and the Unified system.

[4] Prepared by ARVILLE TOUCHET, soil scientist, and NATHAN SCHILLER, area engineer, Soil Conservation Service, in cooperation with the Louisiana Department of Highways.

TABLE 3.—*Engineering*

[Tests performed by the Louisiana Department of Highways in accordance with

Soil series and sample location	Louisiana Department of Highways report number	Depth from surface in typical profile	Mechanical analysis [1]		
			Percent passing sieve—		
			No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)
		In.			
Acadia:					
E¼ sec. 38, T. 6 S., R. 2 W.	30776	8–15	100	98	78
	30777	23–40	100	100	96
Dossman:					
Sec. 40, T. 3 S., R. 1 E.	21204	0–6	100	99	98
	21205	6–22	100	100	100
	21206	46–90	100	100	100
Duralde:					
SE¼SE¼ sec. 25, T. 2 S., R. 1 W.	21934	18–34	98	97	97
	21935	34–52	99	98	98
Evangeline:					
Sec. 36, T. 3 S., R. 1 E.	21207	1–6	100	98	95
	21208	6–16	99	99	96
	21209	26–40	99	99	97
Jeanerette:					
Sec. 75, T. 5 S., R. 2 E.	16374	10–18	99	95	94
	16375	18–32	96	95	95
	16376	32–50	100	99	98
Loring:					
NW¼NW¼ sec. 80, T. 4 S., R. 3 E.	20030	5–17	100	100	99
	20031	17–25	100	99	98
	20032	25–44	100	99	97

[1] Mechanical analysis according to AASHO Designation: T 88–57 (*1*). Results by this procedure may differ somewhat from results the hydrometer method and the various grain-size fractions are calculated on the basis of all the material, including that coarser than 2 millimillimeters in diameter is excluded from calculations of grain-size fractions. The mechanical analysis data used in this table are not suitable

test data

standard procedures of the American Association of State Highway Officials (AASHO)]

Mechanical analysis [1]—Continued				Liquid limit	Plasticity index	Moisture density [2]			Classification	
Percent smaller than—							Optimum	Moisture		

TABLE 4.—*Estimated*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils for referring to other series that appear in the first column of

Soil series and map symbols	Depth from surface [1]	Classification			Percentage passing sieve—	
		USDA	Unified	AASHO	No. 40 (0.42 mm.) [2]	No. 200 (0.074 mm.)
	In.					
Acadia: AcB	0–9	Silt loam	ML	A–4	95–100	85–100
	9–19	Silty clay loam	CL	A–6	95–100	75–100
	19–50	Silty clay or clay	CH	A–7–6	95–100	85–100
*Basile: Bw	0–22	Silt loam	ML	A–4	90–100	75–95
For Wrightsville part of Bw, see Wrightsville series.	22–50	Silty clay loam	CL	A–6	95–100	90–95
	50–63	Silt loam	CL	A–6 or A–4	95–100	80–95
*Caddo: Ca, CaB	0–17	Silt loam	ML	A–4	95–100	70–95
For Messer part of these units, see Messer series.	17–56	Silt loam, silty clay loam	CL or ML	A–6	95–100	70–95
*Calhoun: Ch, Cn	0–20	Silt loam	ML or ML–CL	A–4	100	95–100
For Duralde part of Cn, see Duralde series.	20–70	Silty clay loam or silt loam	CL or ML–CL	A–6 or A–4	100	95–100
Cascilla: Cs	0–60	Silt loam	ML–CL or ML	A–6 or A–4	95–100	90–100
*Crowley: Cv	0–20	Silt loam	ML or ML–CL	A–4	100	90–100
For Vidrine part of Cv, see Vidrine series.	20–40	Silty clay or silty clay loam	CH	A–7–6	100	95–100
	40–80	Silty clay loam	CL or CH	A–6 or A–7–6	100	95–100
Dossman: DoC2, DsE	0–9	Silt loam	ML or ML–CL	A–4	95–100	90–100
	9–32	Silty clay loam	CL	A–7–6	100	95–100
	32–72	Silt loam or silty clay loam	CL	A–6	100	95–100
Duralde: DuB	0–4	Silt loam	ML	A–4	95–100	95–100
	4–21	Silt loam	ML or ML–CL	A–4 or A–6	95–100	95–100
	21–92	Silty clay loam or silt loam	CL	A–7 or A–7–6	95–100	95–100
Evangeline: EvB2, EvC2	0–12	Silt loam	ML or ML–CL	A–4	95–100	95–100
	12–30	Silt loam or silty clay loam	CL	A–6	95–100	95–100
	30–63	Silty clay loam	CL	A–7–6 or A–6	95–100	95–100
Frost: Fr	0–17	Silt loam	ML–CL	A–4 or A–6	95–100	85–95
	17–51	Silty clay loam	CL	A–6 or A–7–6	95–100	90–100
Gallion: Ga, Gc	0–13	Silty clay loam or silt loam	CL or ML	A–6 or A–4	95–100	85–100
	13–24	Silty clay loam	CL	A–6 or A–7–6	95–100	90–100
	24–50	Very fine sandy loam	ML	A–4	95–100	75–95
Glenmora: GeB	0–14	Silt loam	ML	A–4	90–100	75–85
	14–25	Silty clay loam	CL	A–6	95–100	80–95
	25–80	Silty clay loam	CL	A–6	95–100	80–95
*Guyton: Gu, Gy	0–30	Silt loam	ML or ML–CL	A–4	95–100	65–80
For Cascilla part of Gy, see Cascilla series.	30–70	Silty clay loam	CL	A–6	95–100	75–90
Jeanerette: Je	0–10	Silt loam	ML–CL or ML	A–4 or A–6	95–100	95–100
	10–32	Silty clay loam	CL	A–7–6 or A–6	95–100	85–100
	32–50	Heavy silt loam	CL or ML–CL	A–7–6 or A–6	95–100	90–100
Kenney: KeE	0–80	Fine sand	SP–SM or SM	A–3 or A–2–4	50–70	5–15
Latanier: La	0–22	Clay	CH	A–7–6	100	95–100
	22–46	Silty clay loam or silt loam	CL or ML	A–4 or A–6	100	95–100
Loring: LoC2	0–5	Silt loam	ML	A–4	95–100	95–100
	5–23	Silty clay loam	CL	A–6 or A–7–6	95–100	95–100
	23–60	Silt loam	ML–CL or CL	A–4 or A–6	95–100	95–100

See footnotes at end of table.

engineering properties

in such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions this table. Symbol < means less than; symbol > means more than]

Perme-	Available	Shrink-swell	Wetness	Flood	Corrosivity of—

TABLE 4.—*Estimated*

Soil series and map symbols	Depth from surface [1]	Classification			Percentage passing sieve—	
		USDA	Unified	AASHO	No. 40 (0.42 mm.) [2]	No. 200 (0.074 mm.)
	In.					
Mamou: MaB	0–11	Silt loam	ML or ML–CL	A–4	95–100	85–95
	11–19	Silty clay loam	CL or CH	A–7–6	95–100	90–100
	19–64	Loam or silty clay loam	CL or ML	A–6	95–100	90–100
McKamie: McE	0–3	Very fine sandy loam	SM and ML	A–4	90–100	40–60
	3–70	Clay	CH	A–7–6	95–100	85–95
Messer	0–8	Silt loam	ML	A–4	95–100	75–95
Mapped only in complex with soils of Caddo series.	8–31	Silt loam	ML	A–4	95–100	80–95
	31–63	Silty clay loam	CL	A–6	95–100	85–95
Midland: Md	0–5	Silty clay loam	CL	A–6 or A–7–6	100	95–100
	5–57	Clay	CH	A–7–6	100	95–100
Moreland: Mo	0–40	Clay	CH	A–7–6	100	95–100
	40–54	Clay or silty clay loam	CH or CL	A–7–6 or A–6	100	95–100
Mowata: Mt	0–23	Silt loam	ML or ML–CL	A–4	100	90–100
	23–46	Silty clay	CL or CH	A–7–6 or A–6	100	90–100
	46–60	Silty clay loam	CL	A–6	100	90–100
*Muskogee: MuD2	0–6	Silt loam	ML	A–4	95–100	65–85
For McKamie part of MuD2, see McKamie series.	6–22	Silty clay loam	CL	A–6	95–100	75–95
	22–80	Silty clay	CH or CL	A–7–6	95–100	95–100
Olivier: OlB2	0–5	Silt loam	ML or ML–CL	A–4	100	95–100
	5–12	Silty clay loam or silt loam	CL	A–6	100	95–100
	12–65	Silt loam	ML–CL or CL	A–4 or A–6	100	95–100
*Patoutville: PaB2, Pc	0–7	Silt loam	ML	A–4	100	95–100
For Crowley part of Pc, see Crowley series.	7–20	Silty clay loam	CL or CH	A–6–7 or A–6	100	95–100
	20–57	Silty clay loam or silt loam	CL	A–6	100	95–100
Perry: Pe	0–33	Clay	CH or CH–MH	A–7–6 or A–7–5	100	95–100
	33–60	Clay	CH or CH–MH	A–7–6 or A–7–5	100	95–100
Ruston: Ruc, RuD	0–15	Fine sandy loam	SM or ML	A–4 or A–2	80–90	30–60
	15–56	Sandy clay loam	SC or CL	A–6	80–90	35–75
Savannah: SaB	0–7	Very fine sandy loam	ML or SM	A–4	95–100	40–75
	7–34	Sandy clay loam or loam	CL or ML–CL	A–6 or A–4	95–100	50–75
	34–85	Loam or sandy clay loam	ML–CL or CL	A–4 or A–6	95–100	50–75
*Tenot: TeB, Th	0–13	Silt loam	ML	A–4	95–100	95–100
For the Calhoun part of Th, see Calhoun series.	13–24	Silty clay loam	CL or CH	A–6 or A–7–6	95–100	95–100
	24–63	Silty clay loam	CL	A–6	95–100	95–100
Vidrine	0–6	Silt loam	ML	A–4	90–100	80–95
	6–27	Silt loam	ML or ML–CL	A–4	95–100	90–95
Mapped only in complex with Crowley and Wrightsville soils.	27–46	Silty clay	CL or CH	A–7–6	95–100	85–95
	46–72	Silty clay loam	CL	A–7–6 or A–6	95–100	85–95
*Wrightsville: Wv	0–18	Silt loam	ML or CL	A–4 or A–6	95–100	95–100
For the Vidrine part, see Vidrine series.	18–46	Silty clay loam or silty clay	CL or CH	A–7–6	95–100	95–100

[1] None of these soils have bedrock or a permanent water table within 40 inches of the surface. Seasonal water tables are variable, and insufficient data are available for estimating precise depths.

engineering properties—Continued

Reaction	Permeability	Available water capacity	Shrink-swell potential	Wetness hazard	Flood hazard	Corrosivity of—	
						Uncoated steel	Concrete
pH	*In./hr.*	*In./in. of soil*					
5. 1–6. 5	0. 2–0. 63	0. 22–0. 23	Low	Moderate	Slight	High	Moderate.
5. 1–6. 5	0. 06–0. 2	0. 20–0. 22	High.				
5. 5–7. 3	0. 2–0. 63	0. 20–0. 22	Low to moderate.				
4. 5–5. 5	0. 63–2. 0	0. 20–0. 22	Low	No hazard	Slight	High	Moderate.
4. 5–8. 4	<0. 06	0. 18–0. 20	High.				
5. 1–5. 5	0. 63–2. 0	0. 16–0. 18	Low	Slight	Slight	High	High.
4. 5–6. 0	0. 63–2. 0	0. 18–0. 20	Low.				
4. 5–6. 0	0. 06–0. 2	0. 20–0. 22	Moderate.				
5. 0–6. 0	0. 06–0. 2	0. 20–0. 22	Moderate	Severe	Slight to moderate.	High	Low to moderate.
4. 5–7. 3	<0. 06	0. 18–0. 20	High.				
6. 5–8. 4	<0. 06	0. 18–0. 20	Very high	Severe	Moderate	Very high	Low.
7. 4–8. 4	<0. 2	0. 18–0. 22	Very high to high.				
5. 1–6. 0	0. 2–0. 63	0. 22–0. 23	Low	Severe	Moderate	Very high	Low to moderate.
5. 0–7. 3	<0. 06	0. 19–0. 21	High.				
5. 0–8. 4	<0. 2	0. 21–0. 23	Moderate.				

TABLE 5.—*Engineering*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils for referring to other series that

oil series and map symbols	Degree of limitation and chief limiting factors for—						
	Septic tank filter fields	Sewage lagoons	Landscaping and gardening	Picnic areas and golf fairways	Playgrounds	Paved streets, airport runways, and parking areas	Highway location
Acadia: AcB	Severe: very slow permeability; moderate wetness.	Slight	Moderate: moderate wetness; low fertility; clayey subsoil may restrict root development; acid.	Moderate: moderate wetness.	Moderate: moderate wetness.	Moderate: moderate wetness; poor subgrade material.	Moderate: moderate wetness; poor traffic-supporting capacity.
*Basile: Bw. For Wrightsville part of Bw, see Wrightsville series.	Severe: slow permeability; severe wetness; floods in unprotected areas.	Slight: severe if floodwaters are deep.	Severe: severe wetness; subject to flooding.	Severe: severe wetness; floods in unprotected areas.	Severe: severe wetness; floods in unprotected areas.	Severe: severe wetness; subject to flooding.	Severe: severe wetness; floods in unprotected areas; moderate traffic-supporting capacity.
*Caddo: Ca, CaB. For Messer part of these units, see Messer series.	Severe: slow permeability; severe wetness; floods in some areas.	Slight to moderate: fair site material.	Severe: severe wetness; low fertility; floods in some areas; acid.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Moderate to severe: severe wetness; fair subgrade material; floods in some areas.	Severe: severe wetness; floods in some areas; side slopes erode easily; poor traffic-supporting capacity.
*Calhoun: Ch, Cn. For the Duralde part of Cn, see Duralde series.	Severe: slow permeability; severe wetness; floods in some areas.	Slight to moderate: fair site material.	Severe: severe wetness; low fertility; floods in some areas; acid.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Moderate to severe: severe wetness; fair subgrade material; floods in some areas.	Severe: severe wetness; floods in some areas; side slopes erode easily; fair traffic-supporting capacity.
Cascilla: Cs	Severe: subject to flooding.	Moderate: moderate permeability; severe if floodwaters are deep.	Moderate to severe: subject to flooding; acid.	Moderate: subject to flooding.	Severe: subject to flooding.	Severe: subject to flooding.	Severe: subject to flooding.
*Crowley. Cv. For Vidrine part of Cv, see Vidrine series.	Severe: moderate to severe wetness; very slow permeability.	Slight	Moderate: moderate wetness; fairly low fertility; clayey subsoil.	Moderate: moderate to severe wetness.	Severe: moderate to severe wetness.	Severe: moderate to severe wetness; poor subgrade material.	Severe: moderate to severe wetness; fairly low traffic-supporting capacity; high shrink-swell potential in the subsoil.
Dossman: DoC2, DsE	Severe: moderately slow permeability below 32 inches; slope where greater than 10 percent.	Moderate on slopes of 1 to 7 percent; moderately slow permeability below 32 inches; severe on slopes more than 7 percent.	Slight on slopes of 1 to 8 percent; moderate on slopes of 8 to 12 percent; severe on slopes greater than 12 percent; acid.	Slight on slopes of 1 to 8 percent; moderate on slopes of 8 to 15 percent; severe on slopes greater than 15 percent.	Slight on slopes of 1 to 2 percent; moderate on slopes of 2 to 6 percent; severe on slopes more than 6 percent.	Moderate on slopes of 1 to 15 percent; severe on slopes greater than 15 percent.	Moderate: fair traffic-supporting capacity; Moderate shrink-swell potential in the subsoil; severe on slopes greater than 15 percent.
Duralde: DuB	Severe: slow permeability; moderate wetness.	Slight on slopes of 0 to 2 percent; moderate on slopes of 2 to 5 percent.	Moderate: moderate wetness; low fertility; acid.	Moderate: moderate wetness.	Moderate: moderate wetness; slopes where more than 2 percent.	Moderate: moderate wetness; fair subgrade material.	Moderate: fair traffic-supporting capacity; moderate shrink-swell potential in the subsoil; moderate wetness.

interpretations

in such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions appear in the first column of this table]

Degree of limitation and chief limiting factors for—Continued		Soil features affecting land grading or shaping	Suitability as a source of—						
Reservoir areas	Foundations for dwellings and low buildings		Highway subgrade material (road fill)	Road subbase material	Embankment material for earth dams or levees			Soil material for cement base	Topsoil
					Shell	Core	Homogenous		
Slight: some places are too nearly level for dam-type ponds.	Severe: moderate wetness; high shrink-swell in subsoil.	Moderate wetness; slope, where more than 3 percent; clayey subsoil material difficult to work.	Poor	Poor to a depth of 9 inches; not suitable between 9 and 50 inches.	Fair to a depth of 19 inches; poor between 19 and 50 inches.	Fair to a depth of 9 inches; good between 9 and 50 inches.	Fair to a depth of 50 inches.	Fair to a depth of 9 inches; very poor between 9 and 50 inches.	Fair.
Slight: may have seepage from dugouts.	Severe: severe wetness; moderate shrink-	Severe wetness; subject to flooding.	Poor	Poor to a depth of 22 inches; poor to not	Fair	Fair to a depth of 22 inches; fair to good	Fair	Poor to very poor to a depth of 22	Fair.

TABLE 5.—*Engineering*

Soil series and map symbols	Degree of limitation and chief limiting factors for—						
	Septic tank filter fields	Sewage lagoons	Landscaping and gardening	Picnic areas and golf fairways	Playgrounds	Paved streets, airport runways, and parking areas	Highway location
Evangeline: EvB2, EvC2	Severe: moderately slow permeability; slight wetness.	Slight on slopes of 0 to 2 percent; moderate on slopes greater than 2 percent.	Slight: low fertility; acid.	Slight	Slight to moderate: slight wetness; slope, where more than 2 percent.	Slight on slopes of 0 to 3 percent; moderate on slopes of 3 to 5 percent.	Moderate: fair traffic-supporting capacity; slight wetness; moderate shrink-swell potential in the subsoil.
Frost: Fr	Severe: slow permeability; severe wetness; floods in some areas.	Slight	Severe: severe wetness; floods in some areas; low fertility; acid.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; fair subgrade material; floods in some areas.	Severe: severe wetness; floods in some areas; fairly low traffic-supporting capacity.
Gallion: Ga, Gc	Severe: moderately slow permeability; slight wetness.	Slight	Slight on silt loam; moderate on silty clay loam; somewhat difficult to work.	Slight on silt loam; moderate on silty clay loam due to poor trafficability.	Slight on silt loam; moderate on silty clay loam because of poor trafficability.	Moderate: fair subgrade material.	Moderate: fair traffic-supporting capacity; slight wetness.
Glenmora: GeB	Severe: slow permeability; slight wetness.	Slight on slopes of 0 to 2 percent; moderate on slopes of 2 to 3 percent.	Moderate: slight wetness; low fertility; acid.	Slight	Moderate: slow permeability and slight wetness; slope where more than 2 percent.	Moderate: slight wetness; fair subgrade material.	Moderate: fair traffic-supporting capacity; slight wetness.
*Guyton: Gu, Gy For Cascilla part of Gy, see Cascilla series.	Severe: very slow permeability; severe wetness; very severe if flooded.	Moderate: fair dam material; severe if floodwaters are deep.	Severe: low fertility; severe wetness; acid; very severe if flooded.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; fair subgrade material; floods in some areas.	Severe: wetness; floods in some areas; poor traffic-supporting capacity; fair subgrade material.
Jeanerette: Je	Severe: severe wetness; slow permeability; floods in some areas.	Slight	Moderate: severe wetness; floods in some areas; alkaline.	Moderate to severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; fair subgrade material; floods in some areas.	Severe: severe wetness; fair traffic-supporting capacity; floods in some areas.
Kenney sandy subsoil variant: KeE.	Moderate on slopes of 5 to 12 percent; severe	Severe: rapid permeability; poor site mate-	Severe: low water-holding capacity; acid;	Moderate: poor traction when dry; severe on	Moderate: poor traction when dry; subject to	Moderate on slopes of 3 to 8 percent; severe on slopes	Slight on slopes of 3 to 6 percent; moderate on

interpretations—Continued

Degree of limitation and chief limiting factors for—Continued		Soil features affecting land grading or shaping	Suitability as a source of—						
Reservoir areas	Foundations for dwellings and low buildings		Highway subgrade material (road fill)	Road subbase material	Embankment material for earth dams or levees			Soil material for cement base	Topsoil
					Shell	Core	Homogenous		
Moderate: moderately slow permeability.	Moderate: slight wetness; moderate shrink-swell potential in the subsoil.	Slope, where greater than 3 percent.	Fair	Poor to a depth of 12 inches; not suitable between 12 and 80 inches.	Fair	Poor to a depth of 12 inches; good between 12 and 80 inches.	Fair	Poor to a depth of 12 inches; very poor between 12 and 80 inches.	Fair.
Slight	Severe: severe wetness; floods in some areas.	Severe wetness; floods in some areas.	Poor	Poor to a depth of 17 inches; not suitable between 17 and 50 inches.	Fair	Fair to a depth of 17 inches; good between 17 and 50 inches.	Fair	Poor to a depth of 17 inches; very poor between 17 and 50 inches.	Fair.
Moderate: some places are too nearly level for dam-type ponds; dugout ponds may have excessive seepage.	Moderate: moderate shrink-swell potential in subsoil.	Good on silt loam; silty clay loam somewhat difficult to work.	Fair: fair to poor on silty clay loam.	Poor to a depth of 13 inches; not suitable between 13 and 24 inches; poor between 24 and 50 inches.	Fair	Fair to a depth of 13 inches; good between 13 and 24 inches; fair between 24 and 50 inches.	Fair	Fair to a depth of 13 inches; very poor between 13 and 24 inches; poor between 24 and 50 inches.	Fair to good.
Slight: some places are too nearly level for dam-type ponds.	Moderate: slight wetness; low to moderate shrink-swell potential in subsoil.	Slight wetness	Fair	Poor to a depth of 14 inches; not suitable between 14 and 80 inches.	Fair	Fair to a depth of 14 inches; good between 14 and 80 inches.	Fair	Fair to a depth of 14 inches; very poor between 14 and 80 inches.	Fair.
Slight: some	Severe: severe	Severe wetness	Poor to fair	Poor to a depth	Fair	Fair to a depth	Fair	Fair to a depth	Poor to fair.

TABLE 5.—*Engineering*

Soil series and map symbols	Degree of limitation and chief limiting factors for—						
	Septic tank filter fields	Sewage lagoons	Landscaping and gardening	Picnic areas and golf fairways	Playgrounds	Paved streets, airport runways, and parking areas	Highway location
Loring: LoC2	Severe: moderately slow permeability; slight wetness.	Moderate on slopes of 3 to 5 percent.	Slight: low fertility; acid.	Slight	Moderate on slopes of 3 to 5 percent.	Moderate on slopes of 3 to 5 percent; fair subgrade material.	Moderate: fair traffic-supporting capacity.
Mamou: MaB	Severe: moderate wetness; slow permeability.	Slight on slopes of 0 to 2 percent; moderate on slopes greater than 2 percent.	Moderate: moderate wetness.	Moderate: moderate wetness.	Moderate: Moderate wetness.	Moderate: moderate wetness; poor to fair subgrade material; high shrink-swell potential in upper subsoil.	Moderate: moderate wetness; fair traffic-supporting capacity; high shrink-swell potential in upper subsoil.
McKamie: McE	Severe: very slow permeability.	Moderate on slopes of 3 to 8 percent; severe on slopes greater than 8 percent.	Moderate to severe: low fertility; acid; clayey subsoil; slope, where greater than 5 percent.	Moderate: somewhat poor trafficability because of clay subsoil.	Moderate on slope of 8 to 15 percent; somewhat poor trafficability because of clay subsoil; severe on slopes greater than 15 percent.	Severe: Poor subgrade material; slopes, where greater than 3 percent.	Severe: poor traffic-supporting capacity; high shrink-swell potential in subsoil.
Messer Mapped only in complex with soils of Caddo series.	Severe: slow permeability; slight wetness.	Moderate: fair site material at a depth of 0 to 31 inches.	Moderate: low fertility; acid; slight wetness.	Slight	Moderate: slow permeability; slight wetness; slopes, where greater than 2 percent.	Moderate: fair subgrade material; slight wetness.	Moderate: poor to fair traffic-supporting capacity; slight wetness.
Midland: Md	Severe: very slow permeability; severe wetness; floods in some areas.	Slight	Severe: severe wetness; clayey texture somewhat difficult to work; acid; floods in some areas.	Severe: severe wetness; poor trafficability because of clayey texture; floods in some areas.	Severe: severe wetness; poor trafficability because of clayey texture; floods in some areas.	Severe: severe wetness; poor subgrade material; floods in some areas.	Severe: severe wetness; poor traffic-supporting capacity; floods in some areas; high shrink-swell potential in subsoil.
Moreland: Mo	Severe: very slow permeability; severe wetness; floods in some areas.	Slight	Severe: severe wetness; clay texture difficult to work; alkaline; floods in some areas.	Severe: severe wetness; poor trafficability; soil cracks during dry periods; floods in some areas.	Severe: severe wetness; poor trafficability; cracking during dry periods; floods in some areas.	Severe: severe wetness; poor subgrade material; floods in some areas; high shrink-swell potential.	Severe: severe wetness; poor traffic-supporting capacity; floods in some areas.
Mowata: Mt	Severe: very slow permeability; severe wetness; floods in some areas.	Slight	Severe: severe wetness; acid; floods in some areas.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; floods in some areas.	Severe: severe wetness; poor subgrade material; may flood in some areas.	Severe: severe wetness; fairly low traffic-supporting capacity.
*Muskogee: MuD2 For McKamie part of MuD2, see McKamie series.	Severe: slow permeability.	Moderate on slopes of 3 to 8 percent.	Moderate: low fertility; acid.	Slight	Moderate on slopes of 3 to 6 percent; severe on slopes greater than 6 percent.	Severe: poor to fair subgrade material; poor traffic-supporting capacity.	Moderate to severe: fair traffic-supporting capacity; high shrink-swell potential in lower subsoil.

interpretations—Continued

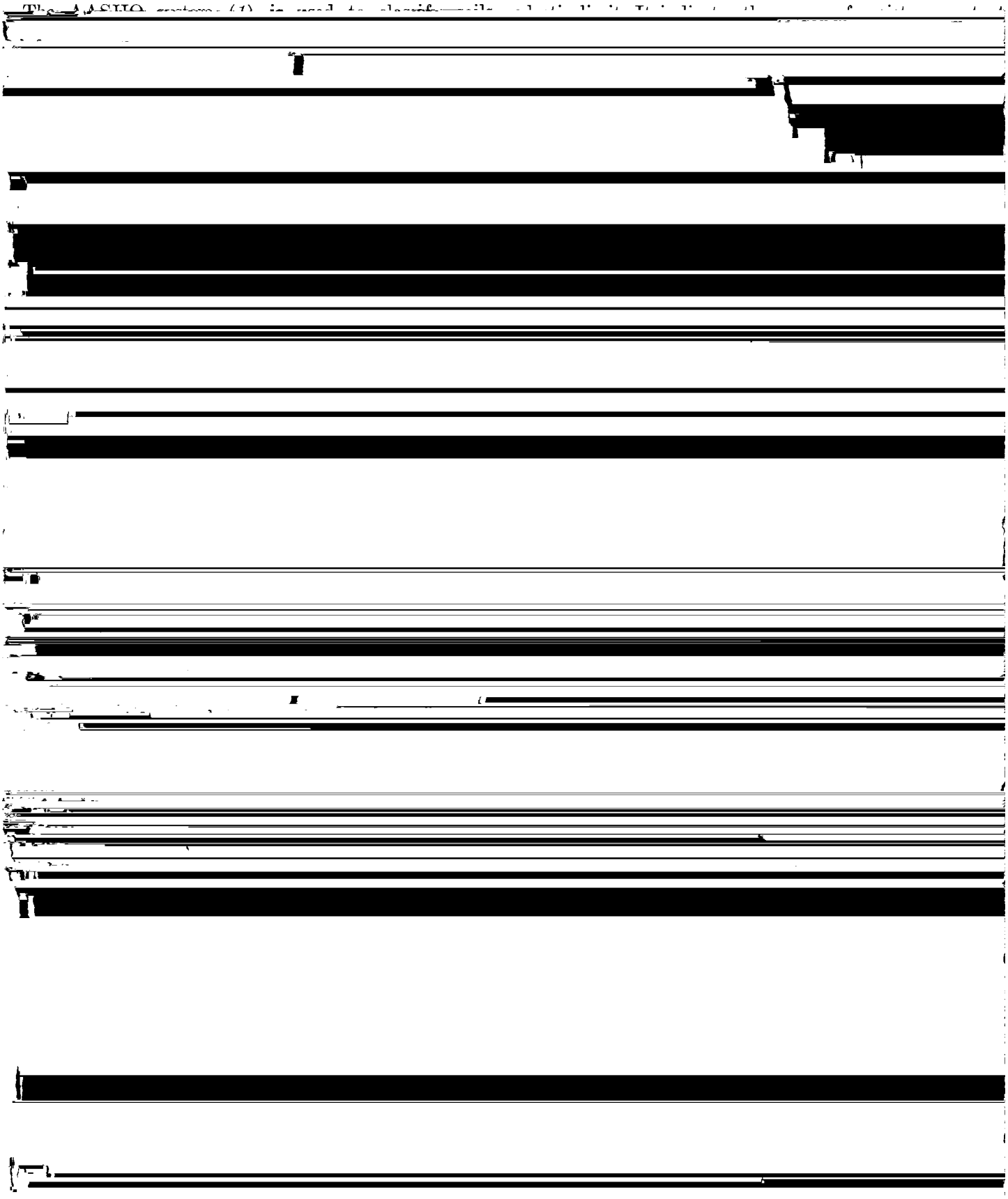
Degree of limitation and chief limiting factors for—Continued		Soil features affecting land grading or shaping	Suitability as a source of—						
Reservoir areas	Foundations for dwellings and low buildings		Highway subgrade material (road fill)	Road subbase material	Embankment material for earth dams or levees			Soil material for cement base	Topsoil
					Shell	Core	Homogenous		
Moderate: moderately slow permeability; topography generally favors dam-type ponds.	Slight	Slope where greater than 3 percent.	Fair	Poor to a depth of 5 inches; not suitable between 5 and 23 inches; poor to not suited between 23 and 60 inches.	Fair	Poor to a depth of 5 inches; good between 5 and 23 inches; fair to good between 23 and 60 inches.	Fair	Poor to a depth of 5 inches; very poor between 5 and 23 inches; poor to very poor between 23 and 60 inches.	Good.
Slight: generally too nearly level for dam-type ponds.	Moderate: moderate wetness; high shrink-swell potential in upper subsoil.	Moderate wetness; somewhat difficult to work.	Fair	Poor to a depth of 11 inches; not suitable between 11 and 19 inches; very poor to not suited between 19 and 64 inches.	Fair to a depth of 11 inches; fair to poor between 11 and 19 inches; fair between 19 and 64 inches.	Fair to a depth of 11 inches; good between 11 and 64 inches.	Fair	Poor to very poor.	Fair.
Slight: generally favors dam-type ponds.	Severe: high shrink-swell potential in subsoil.	Clay subsoil difficult to work; slopes, where greater than 3 percent.	Poor	Poor to a depth of 3 inches; not suitable between 3 and 70 inches.	Fair to a depth of 3 inches; poor between 3 and 70 inches.	Fair to a depth of 3 inches; good between 3 and 70 inches.	Fair	Fair to a depth of 3 inches; very poor between 3 and 70 inches.	Poor.
Slight: generally too nearly level for dam-type ponds.	Moderate: slight wetness.	Slight wetness	Fair	Poor to a depth of 31 inches; not suitable to poor between 31 and 63 inches.	Fair	Fair to a depth of 31 inches; good to fair between 31 and 63 inches.	Fair	Fair to a depth of 31 inches; very poor to poor between 31 and 63 inches.	Good.
Slight: too nearly level for dam-type ponds.	Severe: high shrink-swell potential; severe wetness; floods in some areas.	Severe wetness; texture and wetness limit working time; difficult to work.	Poor	Not suitable	Fair to a depth of 5 inches; poor between 5 and 57 inches.	Good	Fair	Very poor	Poor.
Slight: too nearly level for dam-type ponds.	Severe: severe wetness; very high shrink-swell potential; floods in some areas.	Severe wetness; clayey texture difficult to work.	Poor	Not suitable	Poor to a depth of 40 inches; poor to fair between 40 and 54 inches.	Good	Fair	Very poor to not suited.	Poor.
Slight: suitable for water impoundment; too nearly level for dam-type ponds.	Severe: high shrink-swell potential below a depth of 23 inches; floods in some areas.	Severe wetness; wetness limits working time.	Poor	Poor to a depth of 23 inches; not suitable between 23 and 60 inches.	Poor to a depth of 23 inches; fair between 23 and 60 inches.	Poor to a depth of 23 inches; fair between 23 and 60 inches.	Poor to a depth of 23 inches; fair between 23 and 60 inches.	Poor to a depth of 23 inches; very poor between 23 and 60 inches.	Fair.
Slight: generally favors dam-type ponds.	Moderate: high shrink-swell potential in lower subsoil.	Slopes, where greater than 3 percent; clayey subsoil difficult to work.	Fair to poor.	Poor to a depth of 6 inches; not suitable between 6 and 58 inches.	Fair to poor	Fair to a depth of 6 inches; good between 6 and 58 inches.	Fair	Fair to a depth of 6 inches; very poor between 6 and 58 inches.	Fair in upper 22 inches; poor below 22 inches.

TABLE 5.—*Engineering*

Soil series and map symbols	Degree of limitation and chief limiting factors for—						
	Septic tank filter fields	Sewage lagoons	Landscaping and gardening	Picnic areas and golf fairways	Playgrounds	Paved streets, airport runways, and parking areas	Highway location
Olivier: OlB2	Severe: moderate wetness;	Slight to moderate: fair site	Moderate: moderate wetness;	Moderate: moderate wetness.	Moderate: moderate wetness.	Moderate: moderate wetness; fair	Moderate: moderate wetness;

interpretations—Continued

Degree of limitation and chief limiting factors for—Continued		Soil features affecting land grading or shaping	Suitability as a source of—				
Reservoir areas	Foundations for dwellings and		Highway subgrade	Road subbase	Embankment material for earth dams or levees	Soil material for cement lure	Topsoil



suitable for ponds and reservoirs unless they are treated to reduce seepage.

Available water capacity refers to the capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

Shrink-swell potential indicates the volume change that will occur when a soil changes in moisture content. Much damage to building foundations, roads, and other structures is caused by the shrinking and swelling of soils as a result of alternate wetting and drying. This quality depends on the physical properties or characteristics of the soil. Moreland clay has a very high shrink-swell potential, and the clayey subsoil of the Crowley soils, for example, has a high shrink-swell potential. These soils are high in content of montmorillonitic clay. They are very sticky when wet and develop extensive shrinkage cracks as they dry. Ruston soil, which is low in clay content and nearly nonplastic, has a low shrink-swell potential.

Flood hazard refers to the risk of flooding as a result of stream overflow, runoff from adjacent areas, or local accumulation. Since the soils affected and the depth and duration of floods vary considerably with the severity of each rainstorm, the ratings shown in table 4 for flood hazard are intended only for general guidance. Local records should be relied upon for a more accurate estimate of the overflow hazard for any particular soil. The hazard is no more than slight for soils that are not subject to flooding or that are flooded less than once in 15 years. The hazard is moderate if the soil is flooded at least once in 15 years, and it is severe if the soil is flooded one or more times each year. The overflow hazard is none to slight for such soils as Gallion, Dossman, and Olivier. It is severe for such soils as Cascilla, Basile, and Perry, frequently flooded. Deep drainage ditches in low areas help to protect some soils and may reduce the overflow hazard.

Corrosivity potential refers to the risk of corrosion of untreated steel pipe and concrete as a result of physical and biochemical action. Among the factors that cause corrosion are moisture, soluble salts, electrical conductivity, acidity, texture, and drainage (*9*).

Wetness hazard ratings are based on estimates of the length of time that free water stays in a soil after the saturation point has been reached. The degree of wetness is expressed as slight, moderate, and severe.

Engineering interpretations

In the first part of table 5, the soils of this parish are rated according to degrees of limitations for use as residential and recreational areas, paved streets, landing strips for airplanes, parking areas, foundations for low buildings, highway location, and reservoir areas. The chief limiting factors that affect these uses are shown. The next column in the table lists features that affect land grading or shaping. In the last part, the soils are rated according to their suitability as a source of various construction materials.

Considered in rating limitations for use for dwellings ity, wetness, flood hazard, and slope were considered in rating limitations for use as septic tank filter fields. Slope, quality of embankment material, permeability, and flood hazard were considered in rating limitations for use as sewage lagoons. Flood hazard, wetness, texture, available water-holding capacity, natural fertility, reaction, and slope were considered in rating limitations for landscaping and gardening. Wetness, flood hazard, trafficability, cracking, ease of establishing sod, and slope were considered in rating limitations for use as picnic areas, playgrounds, and golf fairways. Slope, quality of subgrade material, workability, flood hazard, and wetness were considered in rating limitations for paved streets, airport runways, and parking areas. Seepage rate and topography were considered in selecting pond reservoir areas.

Slight limitations are those that are easy to tolerate or overcome. Moderate limitations are those that need to be recognized but can be tolerated or overcome by practicable means. Severe limitations are those that are somewhat difficult or costly to overcome. Very severe limitations are those that are so restrictive that use of the soil for the particular purpose listed generally is not practicable.

Wetness, slope, flood hazard, and workability are the features that affect land grading or shaping.

The suitability of a soil for use as material for subgrade or road fill depends largely on the texture and the water content. Very plastic soils that are high in natural water content are difficult to handle, to dry, and to compact. The Moreland and Perry clays, for example, have a high shrink-swell potential and are rated poor.

Reservoir areas, farm pond embankments (dams), or levees are constructed of one *homogenous* soil or with a *core* of impervious material and a *shell* of less desirable material. These three uses of soil material have different property requirements and therefore receive different weight when rating soil material for placement into suitability classes. The rating criteria are based on rolled earthen dams or levees. Embankment criteria, as related to the Unified Classification System, are used to place soil material in limitation classes of slight, moderate, and severe. The factors considered are (1) shear strength, (2) compaction characteristics, (3) permeability (when compacted), (4) compressibility (compacted and saturated), (5) resistance to piping, and (6) workability as construction material. Permeability is not considered for shell material. The degrees of limitation are based on a weighted average of the effect that the various soil properties of each Unified class have on the desirability of soil material for use in embankments.

For core, the soil material must be relatively impervious when placed and compacted in the center (core) part of the embankment. It may or may not be good for other parts of the embankment.

For shell, the soil material must have shear strength and stability when used as a shell. It does not need to be impervious but may be good for other parts of the dam.

For homogenous, the soil material must have adequate shear strength and stability, resistance to erosion, and be relatively impervious when used as a homogenous embankment.

Soil-cement base material is used to mix with Portland

exposed to wave action. Suitability ratings are based on percent of cement needed to produce soil cement that will withstand many freeze-thaw and wet-dry cycles without deterioration. Generally, a well-graded silty sand that has less than 35 percent passing the number

leaching, the reaction, texture, permeability, and drainage, and it helps to determine the kind of surface and subsoil layers.

Differences in texture in parent material are accompanied by differences in chemical and mineralogical compo-

The parent materials of the Gallion, Latanier, Moreland, and Perry soils are the deposits of the Red River that were deposited while the river occupied its course in Bayou Cocodrie. The texture of the parent material ranges from very fine sandy loam to clay.

Alluvial deposits from local sources are the parent material for the Basile, Cascilla, Frost, and Guyton soils. The texture of the parent material is mostly silt loam and silty clay loam.

Climate

Evangeline Parish has a warm, humid, subtropical climate characterized by relatively high rainfall. The climate is fairly uniform throughout the parish, which

On steep slopes, relief is the dominant factor affecting the thickness of the soil solum. In places, the soil is removed by geologic erosion nearly as fast as it forms. This prevents the development of a thick soil profile. There are no shallow soils in Evangeline Parish, but the solum in the steep Dossman and McKamie soils is only 2 to 5 feet. The more gently sloping Evangeline and the Duralde soils have a solum thickness of 6 to 8 feet.

Time

The difference in the length of time that parent material has been exposed to the active forces of soil formation is commonly reflected in the degree and kind of development of the soil profile.

Two or more of these processes have influenced the development of horizons in most soils in this parish. For example, an accumulation of organic matter and the reduction and transfer of iron are reflected in the faint horizons of the Perry soils.

Enough organic matter has accumulated to form an A1 horizon in most of the soils in the parish. The most pronounced example is the Jeanerette soils, which developed under grass vegetation. Solution and leaching of carbonates and salts have occurred in nearly all soils in

Classification of the Soils

Classification consists of an orderly grouping of soils according to a system designed to make it easier to remember soil characteristics and interrelationships. Classification is useful in organizing and applying the results of experience and research. Soils are placed in narrow classes for discussion in detailed soil surveys and for application of knowledge within farms and fields. The many thousands of narrow classes are then grouped

to produce classes having the greatest genetic similarity. The suborders have a narrower climatic range than the orders. The soil properties used to separate suborders reflect mainly the presence or absence of waterlogging or differences resulting from the climate or vegetation.

GREAT GROUP: Each suborder is divided into great groups, which are based on uniformity in kind and sequence of the major soil horizons and features. The horizons considered in making these separations are

engineering purposes or related residential and industrial purposes. Among the properties considered are texture, mineralogy, reaction, soil temperature, permeability, consistence, and thickness of horizon.

SERIES: The series has the narrowest range of characteristics of the catagories in the classification system. It is explained in the section "How This Survey Was Made." The 32 soil series in Evangeline Parish are classified as shown in table 6.

The broad natural prairies, mostly in the southern part of the parish, were first used for livestock grazing, but the usage soon changed to the production of rice and cotton. The wooded areas in the northern part of the parish furnish timber products. The production from the oilfields and gasfields in the parish adds greatly to the economy of the area.

The population of the parish is about 50 percent urban and suburban and 50 percent rural. In 1964, the rural population actively engaged in farming was estimated at

The other soils of the Prairie Formation are those that have a clayey subsoil. They are on natural prairies and wooded drainageways. Most of these soils are used for rice production. Elevations of this formation range from about 80 feet on the northeastern edge to about 40 feet near the southwest corner of the parish.

The gently sloping areas of the Montgomery Formation make up most of the northern half of the parish. This area rises about 40 feet above the Prairie Formation and is 80 to 100 feet above the

ies to the Mermentau River, which drains directly into the Gulf of Mexico. The other 20 percent of the parish drains into the river valley through the Atchafalaya Basin and then to the Gulf of Mexico.

Climate [5]

Evangeline Parish has a warm, humid, subtropical climate characterized by relatively high rainfall. An average rainfall of more than 4 inches occurs in every month except September and October. Summers are hot and humid. The prevailing winds are from the Gulf of Mexico. The maximum temperature is at least 90° F. or higher on about 83 percent of the days in July and August, but temperatures higher than 100° are rare. Winters are usually mild. An average of only 19 days each year have a minimum temperature of 32° or lower. Moist, tropical air from the south, and dry polar air from the north alternate in winter. Extremely cold weather seldom lasts for more than 3 or 4 days at a time. Table 7 gives temperature and precipitation data for the parish.

The average date of the first temperature of 32° or lower in autumn is November 19, and the average date of the last in spring is February 27. The growing season is about 265 days.

The average annual rainfall is 57.5 inches. Rainfall generally is sufficient for growing a wide variety of cultivated crops and pasture plants, but the amount in some years is inadequate during some periods and excessive in others. Generally, rainfall is in the form of showers. Prolonged rains are infrequent and usually occur in winter. Warm, moist air favors thunderstorms in summer. Heavy rains, usually of short duration, are caused by the remnants of tropical cyclones.

Snow is not common. Amounts of 4 to 8 inches have fallen in January or February, but measurable amounts are rare. Damaging hail is infrequent and occurs only in localized areas in spring and fall.

Relative humidity averages 77 percent at Alexandria, the observing station closest to the parish. It is usually highest at night and lowest in the afternoons. Humidity is 80 percent or higher about half the time and is less than 50 percent about an eighth of the time. The lowest relative humidity, under 25 percent, occurs in winter after an influx of cold air.

About 40 percent of the days are cloudy, 30 percent are clear, and the rest are partly cloudy. Cloud cover averages slightly less in summer than in winter.

Average windspeed is less than 10 miles per hour, and strong, persistent winds are unusual. Locally damaging high winds have been associated with cold fronts in winter, thunderstorms in spring and summer, and with dissipating tropical cyclones in autumn.

Water Supply [6]

In Evangeline Parish large quantities of fresh ground water can be produced from the Chicot aquifer, and small to moderate quantities can be produced from the underlying Evangeline aquifer.

The Chicot aquifer consists mainly of sand and gravel and ranges in thickness from about 50 feet in the northern part of the parish to 350 feet in the southern part. In the central part of northeastern Evangeline Parish, however, the aquifer is only about 30 feet thick. Most of the aquifer is overlain by silt and clay, and the water is mostly under artesian or semiartesian conditions. The potential yield of a properly constructed and developed,

[5] Prepared by GEORGE W. CRY, climatologist for Louisiana National Weather Service, U.S. Department of Commerce.

[6] Information on ground water and surface water in this section was furnished by the U.S. DEPARTMENT OF INTERIOR, Geological Survey, Water Resources Division.

TABLE 7.—*Temperature and precipitation data*

[All data from ESSA Weather Bureau cooperative station at Ville Platte, La., for the period 1931–68]

Month	Temperature				Precipitation		
	Average daily maximum	Average daily minimum	Average maximum	Average minimum	Average total	One year in 10 will have—	
						More than—	Less than—
	°F.	°F.	°F.	°F.	In.	In.	In.
January	62	42	77	24	5.4	9.3	2.0
February	65	44	78	27	4.6	7.8	1.7
March	71	49	83	32	4.6	7.6	1.5
April	79	57	88	40	5.0	9.1	1.2
May	86	64	93	53	5.1	9.4	1.3
June	91	70	97	62	4.9	9.2	1.5
July	92	72	98	67	5.7	10.3	1.6
August	93	72	98	63	4.6	8.2	1.5
September	89	67	96	54	3.9	7.4	1.3
October	82	56	91	40	3.1	7.0	0.3
November	71	47	84	30	4.4	9.0	1.4
December	64	43	78	26	6.2	10.2	3.0
Year	79	57	[1] 100	[2] 21	57.5	72.4	45.0

[1] Average annual highest temperature. [2] Average annual lowest temperature.

large-diameter well that is screened in the thicker and coarser part of the aquifer is 4,000 gallons per minute or more.

Because the water is generally a hard, calcium bicarbonate type high in content of iron, it commonly needs treatment to make it suitable for domestic consumption. In the southern part of the parish, the majority of rural inhabitants obtain water from the Chicot aquifer.

The uses of water from the Chicot aquifer in Evangeline Parish and the average quantity pumped in millions of gallons per day are as follows: irrigation, 130; industrial, 3.7; rural-domestic, 0.95; public supply, 0.64; and livestock, 0.17.

Annual water-level fluctuations in the Chicot aquifer in the northern part of Evangeline Parish are small because here the aquifer is quickly recharged and not heavily pumped for irrigation. The water level near Bayou Chicot is approximately 50 feet below land surface. In the southern part of Evangeline Parish, withdrawals for irrigation are heavy, and seasonal water-level fluctuations are large. The average yearly decline of water levels for the period 1962–69 was about 2.5 feet near Mamou, 1 foot near Ville Platte, and 0.5 foot near Turkey Creek. This decline is primarily attributed to increased withdrawals for irrigation.

The Evangeline aquifer underlies the Chicot aquifer and consists of alternating beds of clay and very fine to

use of surface water, and about 288 million gallons per day was pumped for this purpose from Bayou Cocodrie in 1968. About 95 percent of this water was returned to Bayou Cocodrie. Surface water is also used for irrigation (an average of 17.3 million gallons per day in 1968), recreation, and industrial uses. Livestock consumed about 390,000 gallons per day during 1968. None of the public supply systems in Evangeline Parish use surface water.

The three largest lakes in the parish are Cocodrie Lake, 4,800 acres in area; Millers Lake, 3,000 acres; and Chicot Lake, 1,625 acres. These lakes, in addition to the bayous, creeks, and smaller lakes, offer excellent recreational facilities.

Literature Cited

(1) American Association of State Highway Officials.
1961. standard specifications for highway materials and methods of sampling and testing. Ed. 8, 2 v., illus.

(2) Baldwin, Mark, Kellogg, Charles E., and Thorp, James.
1938. soil classification. U.S. Dept. Agr. Ybk., pp. 979–1001, illus.

(3) Daniels, R. B., and Young, K. K.
1968. loess in south-central louisiana. Southeastern Geol., v. 9, pp. 9–19.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrations of compounds, or of soil grains cemented together. The composition of some concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are examples of material commonly found in concretions.

Consistence, soil. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

Loose.—Noncoherent when dry or moist; does not hold together in a mass.

Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.

Sticky.—When wet, adheres to other material and tends to stretch somewhat and pull apart, rather than to pull free from other material.

Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

Soft.—When dry, breaks into powder or individual grains under very slight pressure.

Cemented.—Hard and brittle; little affected by moistening.

O horizon.—The layer of organic matter on the surface of a mineral soil. This layer consists of decaying plant residues.

A horizon.—The mineral horizon at the surface or just below an O horizon. This horizon is the one in which living organisms are most active and therefore is marked by the accumulation of humus. The horizon may have lost one or more of soluble salts, clay, and sesquioxides (iron and aluminum oxides).

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of change from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics caused (1) by accumulation of clay, sesquioxides, humus, or some combination of these; (2) by prismatic or blocky structure; (3) by redder or stronger colors than the A horizon; or (4) by some combination of these. Combined A and B horizons are usually called the solum, or true soil. If a soil lacks a B horizon, the A horizon alone is the solum.

C horizon.—The weathered rock material immediately beneath the solum. In most soils this material is presumed to be like that from which the overlying horizons were formed. If the material is known to be different from that in the solum, a Roman numeral precedes the letter C.

R layer.—Consolidated rock beneath the soil. The rock usually underlies a C horizon but may be immediately beneath an A or B horizon.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are—

alkaline soil is one that is alkaline in reaction. In words, the degrees of acidity or alkalinity are expressed thus:

	pH		*pH*
Extremely acid	Below 4.5	Neutral	6.6 to 7.3
Very strongly acid	4.5 to 5.0	Mildly alkaline	7.4 to 7.8
Strongly acid	5.1 to 5.5	Moderately alkaline	7.9 to 8.4
Medium acid	5.6 to 6.0	Strongly alkaline	8.5 to 9.0
Slightly acid	6.1 to 6.5	Very strongly alkaline	9.1 and higher

Sand. Individual rock or mineral fragments in a soil that range in diameter from 0.05 to 2.0 millimeters. Most sand grains consist of quartz, but they may be of any mineral composition. The textural class name of any soil that contains 85 percent or more sand and not more than 10 percent clay.

Silt. Individual mineral particles in a soil that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). Soil of the silt textural class is 80 percent or more silt and less than 12 percent clay.

Site index. A numerical means of expressing the quality of a forest site that is based on the height of the dominant stand at an arbitrarily chosen age; for example, the average height

hering together without any regular cleavage, as in many claypans and hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tillage of a soil below normal depth ordinarily to shatter a hardpan or claypan.

Substratum. Technically, the part of the soil below the solum.

Surface soil. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, about 5 to 8 inches in thickness. The plowed layer.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that it may soak into the soil or flow slowly to a prepared outlet without harm. Terraces in fields are generally built so they can be farmed. Terraces intended mainly for drainage have a deep channel that is maintained in permanent sod.

Terrace (geological). An old alluvial plain, ordinarily flat or undulating, bordering a river, lake, or the sea. Stream terraces are frequently called second bottoms, as contrasted to flood plains, and are seldom subject to overflow. Marine terraces were deposited by the sea and are generally wide.

Texture, soil. The relative proportions of sand, silt, and clay par-

GUIDE TO MAPPING UNITS

For a full description of a mapping unit, read both the description of the mapping unit and that of the soil series to which the mapping unit belongs. The suitability of the soils for crops and pasture, wildlife, and woodland is explained in the description of each mapping unit. The capability classification system is described on pages 40 and 41. Other information is given in tables as follows:

Acreage and extent, table 1, page 7.
Estimated yields, table 2, page 42.

Uses of the soils in engineering, tables 3, 4, and 5, pages 44 through 57.

Map symbol	Mapping unit	Described on page	Capability unit Symbol
AcB	Acadia silt loam, 1 to 3 percent slopes	7	IIIe-1
Bw	Basile-Wrightsville complex, frequently flooded	8	Vw-1
Ca	Caddo-Messer complex	9	IIIw-1
CaB	Caddo-Messer complex, undulating	10	IIIw-2
Ch	Calhoun silt loam	11	IIIw-3
Cn	Calhoun-Duralde complex	12	IIIw-3
Cs	Cascilla silt loam, frequently flooded	13	Vw-2
Cv	Crowley-Vidrine complex	14	IIIw-4
DoC2	Dossman silt loam, 1 to 5 percent slopes, eroded	15	IIe-1
DsE	Dossman soils, 8 to 30 percent slopes	15	VIe-1
DuB	Duralde silt loam, 1 to 3 percent slopes	16	IIw-1
EvB2	Evangeline silt loam, 1 to 3 percent slopes, eroded	17	IIe-1
EvC2	Evangeline silt loam, 3 to 5 percent slopes, eroded	18	IIIe-2
Fr	Frost silt loam, occasionally flooded	18	IVw-1
Ga	Gallion silt loam	19	I-1
Gc	Gallion silty clay loam	20	IIw-3
GeB	Glenmora silt loam, 1 to 3 percent slopes	21	IIe-2
Gu	Guyton silt loam, occasionally flooded	21	IVw-1
Gy	Guyton-Cascilla complex, frequently flooded	22	Vw-3
Je	Jeanerette silt loam	23	IIw-2
KeE	Kenney fine sand, sandy subsoil variant, hilly	23	VIe-2
La	Latanier clay	24	IIIw-6
LoC2	Loring silt loam, 3 to 5 percent slopes, eroded	25	IIIe-2
MaB	Mamou silt loam, 1 to 3 percent slopes	26	IIw-1
McE	McKamie soils, 8 to 30 percent slopes	27	VIe-3
Md	Midland silty clay loam	28	IIIw-5
Mo	Moreland clay	29	IIIw-6
Mt	Mowata silt loam	30	IIIw-7
MuD2	Muskogee-McKamie complex, 3 to 8 percent slopes, eroded	30	IVe-1
OlB2	Olivier silt loam, 1 to 3 percent slopes, eroded	31	IIw-1
PaB2	Patoutville silt loam, 1 to 3 percent slopes, eroded	32	IIw-1
Pc	Patoutville-Crowley complex	33	IIw-3
Pe	Perry clay, frequently flooded	33	Vw-4
RuC	Ruston fine sandy loam, 1 to 5 percent slopes	34	IIe-3
RuD	Ruston fine sandy loam, 5 to 8 percent slopes	35	IIIe-3
SaB	Savannah very fine sandy loam, 1 to 3 percent slopes	35	IIe-4
TeB	Tenot silt loam, 1 to 3 percent slopes	37	IIw-1
Th	Tenot-Calhoun complex	37	IIIw-3
Wv	Wrightsville-Vidrine complex	39	IIIw-3